

Journal of **Testing and Evaluation**





2299 Manihot esculenta Peel Powder: Effective Adsorbent for Removal of Various Textile Dyes from Aqueous Solutions C. Parvathi, U. S. Shoba, C. Prakash, and S. Sivamani

Model Test of the Long-Term Behavior of a Pile-Net Structure Subgrade for Highspeed Railways Xilin Lü, Quan Ma, Linlong Mu, and Hang Fang

Evolution of the Temperature Field of the Subgrade in the Permafrost Regions of the Great Khingan Mountains

Haiping Liu, Lin Ding, Yang Yang, Meng Guo, and Yiqi Wang

2330 Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and DaFu Cao

Ultimate Lateral Resistance of Quadrangle Array Piles Using the Strain Wedge Model on Soil Subgrade Jiseong Kim and Gi-Chun Kang

Rheological Characteristics of Fine-Grained Soil-Slurries Rakshith Shetty and Devendra Narain Singh

Improvement of Energy Efficiency Using a Multi-Input Fuzzy Logic Controller in a Stone Cutting Machine Said Mahmut Cinar, Hasan Cimen, and I. Sedat Buyuksagis

2376 Experimental Study on Impact Crushing of Granite Particles Jian-hong Yang, Qi Chen, Jian-hua Zhou, and Huai-ying Fang

Wear Resistance of Four Rocks Using Rotary Abrasion Test in Dry and Wet Conditions Taegeon Lee, Seung Oh Lee, Dong-Woo Ryu, and Heejung Youn

2399 Advanced Method for Quantifying Socket Roughness and Empirical Correlations Byeong-Han Jeon, Chae-Min Kim, and Yongkyu Choi

Microcrack Growth Behavior and CWFS Criterion Parameters Optimization of Granite with PFC Shengjun Miao, Hui Wang, Xuelian Guo, Mingchun Liang, and Changqing Kong

2422 Charpy Impact Test Methods for Cementitious Composites: Review and Commentary

Robert J. Thomas and Andrew D. Sorensen

Investigation of the Synthesized Retarder on Cement Slurry Hydration Based on Low Field NMR Zhigang Peng, Jinhua Huo, Zhongbin Ye, Rui Zhang, and Qian Feng

2440 Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique Surya Pratap Singh and Krishna Prapoorna Biligiri

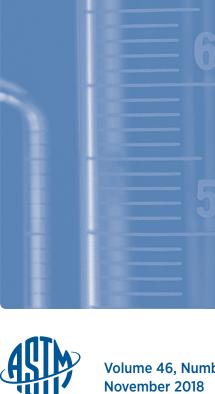
2450 Prediction of Mechanical Performance of Cemented Paste Backfill by the Electrical Resistivity Measurement Wenbin Xu, Xichun Tian, and Changbing Wan

2459 Sampling Concrete from a Revolving Drum Truck Mixer John J. Schemmel, Tiffany N. Kolba, Michael P. Salguero, and Matthew West

2470 Fatigue Damage Characteristics Considering the Difference of Tensile-Compression Modulus for

Asphalt Mixture Songtao Lv, Xiaoyang Wang, Chaochao Liu, and Shuangshuang Wang

2483 Nonrecoverable Compliance and Recovery Behavior of Polymer-Modified and Reclaimed Asphalt Pavement-Modified Binders in Arkansas Mohammed Ziaur Rahaman, Zahid Hossain, and Musharraf Zaman





Volume 46, Number 6 Coden: JTEVAB

(Contents continued on back cover)



EDITOR-IN-CHIEF

Dr. M. R. Mitchell Mechanics & Materials, LLC 4447 Acrete Lane Flagstaff, AZ 86004, USA

EDITORIAL OBJECTIVES

The *Journal of Testing and Evaluation* is published in six issues per year by ASTM International, a nonprofit technical organization that develops and publishes voluntary consensus standards and related information for materials, products, systems, and services.

Some issues, in whole or in part, may be Special Issues focused on a topic of interest to our readers.

Contributions are peer reviewed prior to publication.

EDITORIAL SERVICES—SUBMISSIONS

Sara Welliver

Supervisor, Peer Review Services Journal of Testing and Evaluation Editorial Offices **J&J** Editorial Services 201 Shannon Oaks Cir #124 Cary, NC 275511, USA Tel: (919) 650-1459 ext. 210 E-mail: astm@jjeditorial.com

PURPOSE AND SCOPE

The editorial objectives of the Journal of Testing and Evaluation is to serve a broad-based audience by:

- Publishing new technical information derived from the field and laboratory testing, performance, quantitative characterization, and evaluation of these materials, products, systems, and services.
- Presenting new methods and data and critical evaluations of these methods and data.
- Reporting the users' experience with test methods and the results of interlaboratory testing and analysis.
- Providing the scientific basis for both new and improved ASTM International standards.
- Stimulating new ideas in the fields of testing and evaluation.
- Including papers, technical notes, letters to the editor, discussions of previously published papers, and book reviews as contributions.

POSTMASTER: Send address change to ASTM International— JTE, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

Printed in the U.S.A.

EDITORIAL BOARD

Dr. Ali Abolmaali University of Texas at Arlington Arlington, TX, USA

Dr. Aziz Amoozegar North Carolina State Univeristy Raleigh, NC, USA

Dr. Patricia Annis

University of Georgia Athens, GA, USA

Dr. Farhad Aslani

University of Western Australia Crawley, WA, Australia

Dr. Nemkumar Banthia

Dr. Neal S. Berke

Tourney Consulting Group, Ltd. Kalamazoo, MI, USA

Dr. Filippo BertoUniversity of Padua, Italy, and Norwegian University of Science and Technology
Trondheim, Norway

Dr. Krishna Prapoorna Biligiri

Indian Institute of Technology Kharagpur, West Bengal, India

Dr. Laura Bix

Michigan State University East Lansing, MI, USA

Dr. Andrew F. Braham

University of Arkansas Fayetteville, AR, USA

Dr. Andreas Brunner

Empa, Swiss Federal Labs Switzerland

Prof. Andrea Carpinteri

University of Parma Parma, Italy

Dr. Wen-Ruey Chang

Liberty Mutual Research Institute for Safety Hopkinton, MA, USA

Dr. Dar-Hao Chen

Texas Dept. Of Transportation Austin, TX, USA

Dr. Haiqiang Chen Xiamen University Fujian, China

Dr. Kuen-Suan Chen

National Chin-Yi University of Technology Taiwan

Dr. Richard A. Coffman University of Arkansas Fayetteville, AR, USA

Dr. Tong Cui

Qualcomm Packaging San Diego, CA, USA

John S. Dick

Alpha Technologies Akron, OH, USA

Prof. Ying Fang Xiamen University Xiamen, China

AGH University of Science and Technology Krakow, Poland

Dr. Yu-Ning Louis Ge

National Taiwan University Taipei, Taiwan

Dr. T. Russell Gentry

Georgia Institute of Technology Atlanta, GA, USA

Dr. Meng Guo

Beijing University of Technology Beijing, China

Dr. Rajeev Kumar Gupta University of Akron, Akron, OH, USA

Dr. Rakesh Gupta Oregon State University Corvallis, OR, USA

Dr. Marcelo Hirschler Mill Valley, CA, USA

Mr. Hui-Min Huang

Gaithersburg, MD, USA

Dr. Xiaoming Huang Southeast University

Nanjing, China

Dr. Jiancheng Jiang University of North Carolina, Charlotte Charlotte, NC, USA

Dr. Tao Jiang University of Connecticut Health Center Farmington, CT, USA

Dr. Thomas Iones

Alcoa Howmet Corp Whitehall, MI, USA

Dr. Sreeramesh Kalluri Ohio Aerospace Institute Brook Park, OH, USA

Dr. Siyakumar Kandasami

Larsen & Toubro Construction Chennai, India

Dr. Xin Kang TerraSense Geotechnical Lab

Totowa, NJ, USA

Dr. Vistasp M. Karbhari University of Texas at Arlington Arlington, TX, USA

Dr. Yong-Rak Kim

University of Nebraska-Lincoln Lincoln, NE, USA

Dr. Govindaraju Kondaswamy

Massey University Palmerston, North New Zealand

Dr. Brandon Krick Lehigh University Bethlehem, PA, USA

Dr. Chaker Larabi University of Poitiers Poitiers, France

Dr. Gang Li Xi'an Jiaotong University Shaanxi Province, China

Dr. William Luecke

National Institute of Standards and Technology Gaithersburg, MD, USA Douglas C. Meier

National Institute of Standards and Technology Gaithersburg, MD, USA

Mr. Thomas F. O'Connor Milan, MI, USA

Dr. William T. Riddell

Rowan University Haddonfield, NJ, USA

Mr. John Riegel, III R3 Technology, Inc. Springfield, VA, USA

Dr. Elena Romeo University of Parma

Parma, Italy Dr. Roberto Sabatini

RMIT University Melbourne, VIC, Australia Dr. Rajarshi Saha

Bridgelux, Inc. Livermore, CA, USA

Dr. Christopher G. Scott Lubrizol Corporation Wickliffe, OH, USA

Dr. Steven I. Shaffer Bruker Nano Surfaces Division San Jose, CA, USA

Dr. Suraj Sharma

University of Georgia Athens, GA, USA

Dr. Ranganath K. Shastri

Plastics Solutions Midland, MI, USA

Dr. Punith Veeralinga Shivaprasad

Clemson, SC, USA

Dr. Cy (Chor-yiu) SinNational Tsing Hua University
Hsinchu, Taiwan, R.O.C.

Dr. Stein Sture University of Colorado, Boulder, CO, USA

Dr. Julian Tao University of Akron, Akron, OH, USA

Dr. Ingrid Tomac

University of California, San Diego San Diego, CA, USA

Dr. Sabrina Vantadori

University of Parma Parma, Italy

Dr. Matthieu Vignes

Massey University Manawatu Palmerston North, New Zealand

Dr. Hao Wang Rutgers, The State University of New Jersey Piscataway, NJ, USA

Dr. Jinfeng Wang Zhejiang Universit Hangzhou, China

Dr. Shuying Wang Central South University Hunan, China

Dr. Xuexin Wang Xiamen University Xiamen, China

Dr. Shaopeng Wu Wuhan University of Technology Wuhan, China

Dr. Shenghua Wu University of South Alabama Mobile, AL, USA

Dr. Feipeng Xiao Clemson University Clemson, SC, USA

Dr. Ming Xiao The Pennsylvania State University University Park, PA, USA

Dr. Yang Xiao

Chongqing University Chongqing, China

Dr. Xiong (Bill) Yu Case Western Reserve University Cleveland, OH, USA

Prof. Menglan Zeng Hunan University Changsha, Hunan, China

Dr. Xibin (Bill) Zhang Monash University, Caulfield East Victoria, Australia

View our website: www.astm.org

Journal of Testing and Evaluation Table of Contents Volume 46, 2018

NO.	1,	January	

Validation of a Clothing Heat Transfer Model in Nonisothermal Test Conditions—Meredith McQuerry	1
The Case for Technical Performance Standards for Radiation Inspection Systems—LARRY HUDSON	8
Improvement of Measuring Accuracy for Coating Covered on Conical Steel Shells by Correction of Eddy Current Signals—Meixian Wu, Dongli Zhang, Zhenmao Chen, and Yong Li	17
Development of Virtual Visual Sensor Applications for Wood Structural Health Monitoring—K. Walker, T. H. Miller, R. Gupta, A. Shariati, and T. Schumacher	24
On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects—M. SAADATI, P. FORQUIN, K. WEDDFELT, P. L. LARSSON, AND F. HILD	33
Investigation and Modeling of Sound Absorption Properties of Thin Layer Wearing Course—Mingliang Li, Bin Xu, Dongwei Cao, Yongjun Fan, and Shujiang Ping	46
3D Quasi-Static Strengths and Elastic Constants of Glass Fiber Reinforced Polyester Composite Extracted From a Wind Turbine Blade— H. G. Kotik and J. E. Perez Ipiña	55
Bonding Durability of Two Repair Mortars with Low Modulus Cement and Asphalt Mortar (CA Mortar)—LIU YUNPENG, WANG FAZHOU, HU SHUGUANG, AND LIU MUYU	67
Development of an Equibiaxial Tensile Test Device and Associated Test Method for Parameter Identification of Hyperelastic Ogden Model of Soft Material—Jonas A. Pramudita, Harutaka Kubota, Yuji Tanabe, Masato Ito, and Ryoji Watanabe	77
Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications —M. HASANUZZAMAN, L. HASHEMIAN, AND A. BAYAT	88
Flexible Pavement Interface Bonding: Theoretical Analysis and Shear-Strength Measurement—H. Wang, G. Xu, Z. Wang, and T. Bennert	99
Compressive Behavior of Cement Asphalt Mortar Under Low Confinement—X. Wu and JF. Wang	108
Nondestructive Acoustic Emission Test to Evaluate Thermal Damage in Asphalt Concrete Materials—Behzad Behnia, William G. Buttlar, and Henrique Reis	118
Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures— D. J. Mensching, M. M. Jeong, and L. Myers McCarthy	127
Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete— BEHZAD HATAMI, AMIR MOHAMMAD RAMEZANIANPOUR, AND AMIR SAEDI DARYAN	141
Experimental Study on Dynamic Strength Improvement Mechanism of Concrete Materials—Dong Lei, Jintao He, Feipeng Zhu, and Pengxiang Bai	151
The Study of UHPC Precast Concrete Containing Incinerator Fly Ash—Ming-Ju Lee, Ming-Gin Lee, Yu-Min Su, Yishuo Huang, and Wen-Chih Tung	160
Derivation of Complete Stress–Strain Curve for SSTT-Confined High-Strength Concrete in Compression—HP. Lee, A. Z. Awang, W. Omar, and P. L. Y. Tiong	168
Shear Transfer in Normal- and High-Strength Recycled Aggregate Concrete—S. A. WASEEM AND B. SINGH	178
Rietveld Quantitative Stability of Portland Blast Furnace Slag Cement Between Internal and External Standard Methods—P. Zhao, X. Liu, L. Lu, and P. Wang	191
A New Multicoefficients Creep Model for Concrete—Wenzhong Zheng and Can Tang	199
Laboratory Evaluation of Aging on Engineering Properties of Fine-Graded Porous-Asphalt Concrete—MC. Liao, YY. Lin, and MY. Tseng	215
Physiological Information for Pavement Ride Quality Verification—K. Tomiyama and A. Kawamura	227
Vibration Levels in Vans as a Function of Payload and Leaf Spring Sheet Number—Péter BÖRÖCZ	236
Research on Load Spectrum Construction of Bench Test Based on Automotive Proving Ground—XIAOBING YANG, XINTIAN LIU, JIACHI TONG, YANSONG WANG, AND XIAOLAN WANG	244
Voltage Sensorless Controller for Photovoltaic Integrated Shunt Active Power Filter for Enhancement of Power Quality— C. Ramakrishnan and R. Pradeep	252
Performance Evaluation of PV-Supported STATCOM for Voltage and Frequency Regulation of Standalone SEIG System— K. Tamilselvan and R. Anita	266
A Strategy to Determine Partial Discharge in XLPE Power Cables Using Acoustic Emission Detection Technique—D. F. Jingle Jabha, K. Selvi, and R. Joselin	283

Strength of Aluminum Alloys Under Static Mixed-Mode I/II Loading Conditions—F. Tariq, M. Khan, M. Farhan, and M. Z. Siddiqui	294
Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability Evaluation of AISI-8620 Case-Hardening Steel—MUHAMMAD AQIB HASSAN, MUHAMMAD MEHDI, MUHAMMAD OWAIS, MUHAMMAD NASIR, AND SYED MUHAMMAD KUMAII. HAIDER	305
Improved Artificial Bee Colony Optimization Approach in UWBOFDM for Frequency Offset Estimation—R. Eswaramoorthi and G. Singaravel	317
An Evaluation of Vacation Lifestyle Scale—Using International and Theme Resort Hotels in Taiwan as Examples—SY. Lin, PJ. Juan, and TY. Hsu	331
Production Yield for Multiple Line Processes: Product Acceptance Determination—W. L. Pearn, Y. T. Tai, and Y. T. Chiu	340
Extracting More from Dynamic Modulus Data Using Split-Plot Repeated Measures Analysis—Ashley Buss, Mohamed Elkashef, and W. Robert Stephenson	351
Bayesian Estimates and the Effectiveness of Metal Detection Devices—PAUL B. KANTOR	365
REVIEW PAPER	
Definition and Quantification of Anchor Ductility and Implications on Seismic Design—P. MAHRENHOLTZ AND R. ELIGEHAUSEN	370
TECHNICAL NOTES	
Application of Nonlinear Ultrasonic Technique to Characterize the Damage Evolution in Structural Steel after Tensile Deformation—XIAO WANG, XUE WANG, LEI HU, CHENG-CHAO DU, AND YONG LI	385
Effect of Tensile or Compressive Overload on the Fatigue Crack Growth of Friction Stir Welded 19501 Aluminum Alloy— Prakash Chandra Gope, Harshit Kumar, and Himanshu Purohit	394
Simulated Road Profiles According to ISO 8608 in Vibration Analysis—P. Múčka	405
Depth-from-Focus-Based 3D Reconstruction of Asphalt Pavement Micro-Texture—X. Cui, X. Zhou, J. Lou, J. Zhang, and M. Ran	419
Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements—ZH. NIE, T. JIAO, X. WANG, AND T. QIU	428
No. 2, March	
Research on Nitrate Removal by Graphene Loaded With Iron Nanoparticles for Groundwater Remediation—Y. Wang, S. Yang, C. Gao, B. Li, and G. Ji	435
Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids—B. Anil Kumar Naik and A. V. Vinod	445
Mini Round-Robin Test on the Split Hopkinson Pressure Bar—M. A. Kariem, D. Ruan, J. H. Beynon, and D. A. Prabowo Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System—R. Velumani, M. Vijayakumar, and M. Ramasamy	457 469
Experimental Study on Mechanical Property of Honeycombed-Core Girderless Floor with Four Edges Simply Supported—W. Yang, P. Jiang, and B. Han	485
An Experimental Study on Cement-Solidified Cd-Contaminated Soils under Drying-Wetting Cycles—Huikai Liu, Haijun Lu, Xiong Zhang, Jixiang Li, and Weiwei Wang	493
Prediction of Quantitative Response of Under-Reamed Anchor Piles in Soft Clay Using Laboratory Model Study—Y. S. Golait, A. H. Padade, and T. Cherian	507
Experimental Study of Micropile Lateral Resistance Effectiveness—Y. Du, M. Bai, Y. Chen, X. Wang, and Z. Li	523
Locating Wood Defects Based on Vibration Modes—Y. MIAO, M. ZHONG, AND Z. LIU	534
Mechanical Characterization of Granite Rock Materials: On the Influence from Pre-Existing Defects—D. Jelagin, M. Saadati, I. Jerjen, and PL. Larsson	540
Resistivity, Penetrability and Porosity of Concrete: A Tripartite Relationship—A. Bediwy and M. T. Bassuoni	549
Long-Term Compressive Behavior of Concretes with Sugarcane Bagasse Ash as a Supplementary Cementitious Material—G. C. Cordeiro, O. A. Paiva, R. D. Toledo Filho, E. M. R. Fairbairn, and L. M. Tavares	564
Assessment of Radioactivity in Concrete Made with e-Waste Plastic—K. Senthil Kumar, P. V. Premalatha, K. Baskar, G. Sankaran Pillai, and P. Shahul Hameed	574
Assessing Moisture Sensitivity of Rubberized Warm Mix Asphalt Mixtures Using the Surface Free Energy Method and Dynamic Water Pressure Tester—Jiangmiao Yu, Chunlong Xiong, Xiaoning Zhang, Zhesheng Ge, and Guanfeng An	580
Optimization on Additives of SBS and CTR for Interlayer Asphalt in Rigid-Flexible Composite Pavement—Sheng Li, Fan Yang, and Zhao-Hui Liu	593
Low Temperature Properties of Waste Edible Vegetable Oil Rejuvenated Asphalt Binder with Recycled Tire Rubber—D. Zhang, M. Chen, S. Wu, J. Zheng, and Y. Sang	602
Evaluating the Rutting Performance of Geosynthetic Reinforced Pavement Containing Rubberized Asphalt Mixtures—A. K. Khiavi, B. Bakhshi, and V. Hojjat	610
Investigation on Thermo-Oxidative Aging Properties of Asphalt Binder with Hindered Phenolic Antioxidant—W. Wu, L. Li, J. Yu, S. Xu, C. Zhang, and L. Xue	624

Evaluation of Nondestructiveness of Resonant Column Testing for Characterization of Asphalt Concrete Properties—P. Tavassoti-Kheiry, I. Boz, M. Solaimanian, and T. Qiu	631
NDT of Cavity Defect in Metallic Plate Using dc Potential Drop Method—XIAOJUAN WANG, WENLU CAI, AND ZHENMAO CHEN	641
Non-Destructive Evaluation of the Bending-Fatigue Damage in Carbon-Fiber-Composite Laminates Based on Ultrasonic Wave Propagation—M. HE AND T. YANG	647
Experimental and Analytical Modal Analysis of Cantilever Beam for Vibration Based Damage Identification Using Artificial Neural Network—P. S. RAO, V. RAMAKRISHNA, AND N. V. D. MAHENDRA	656
Blast Performance of Demining Footwear: Numerical and Experimental Trials on Frangible Leg Model and Injury Modeling—M. Karahan, E. A. Karahan, and N. Karahan	666
Development and Application of the New Explosive Loading Experimental System of Digital Laser Dynamic Caustics—Y. WANG	680
Sequential Sampling Plan in the Truncated Life Test for Weibull Distribution—HASAN RASAY, MORTEZA POURGHARIBSHAHI, AND MOHAMMAD SABER FALLAHNEZHAD	693
A Framework of Applying Ordering Coefficient Based on the Information Energy to Identify the Causal Relationships among Critical Factors from Raw Data—JI. Shieh and HH. Wu	704
Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties—C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline	714
On the Properties of the UBAC(2) Class of Life Distributions—N. S. A. ALI	730
A New Application of Beta Gompertz Distribution in Reliability—M. KH. HASSAN	736
A Sustainability Strategy Assessment Framework Model for Medical Tourism Supply Chain in Asia—KC. Chung and LC. Chang	745
Evaluation of Two Process Yields in Acceptance Sampling Plans—K. A. Butt, M. Aslam, FK. Wang, H. Lee, and CH. Jun	756
Effect of Aluminum Content on Interfacial Reaction of Directionally Solidified TiAl Alloys—C. Cheng, Y. Sui, K. Feng, J. Qi, Y. He, Q. Meng, F. Wei, and Z. Sun	764
Study of the Efficiency and Temperature Loss Caused by Degassing and Filtration of AlSi ₉ Cu ₃ Alloy—C. Demian, D. Ferreño, E. Ruiz, And J. A. Casado	772
Energy and Exergy Efficiency of Flat Plate PVT Collector With Forced Convection—B. SRIMANICKAM, M. M. VIJAYALAKSHMI, AND E. NATARAJAN	783
REVIEW PAPER	
Evaluating Various Lung Cancer Nodule Detection Techniques—A Comparative Study—G. USMAN, M. A. FAHIEM, S. FARHAN, AND H. TAUSEEF	798
TECHNICAL NOTES	
An Improved Method for Calculating Viscosity Index (VI) of Low Viscosity Base Oils—M. J. COVITCH	820
Effect of Surface Roughness and Hardness of Continuum Materials on Interface Shear Strength of Granular Materials— H. M. ABUEL-NAGA, H. A. SHAIA, AND A. BOUAZZA	826
Micromechanical Simulation of Influence Factors of Indirect Tensile Test of Asphalt Mixture—W. Liu, Y. Gao, and L. Li	832
Evaluation of Fracture Tearing Resistance of Dissimilar Metal Welds in Laser Welded Thin Steel Sheets—L. Ambriško and L. Pešek	842
No. 3, May	
Enhanced Artificial Bee Colony Algorithm for Liver Cancer Analysis—K. Lokanayaki and A. Malathi	851
Analytical Performance Test of Pancreas Cancer miRNA Chip—CH. Lee, J. Lee, J. Lee, J. Heo, and M. S. Noh	865
Approbation of the Ruffier Test Model Adapted for Children—Ihor Zanevskyy and Lyudmyla Zanevska	872
Evaluating the Mesostructural Changes of Laboratory Created Soil-Rock Mixtures Using a Seepage Test Based on NMR Technology— Shangxin Feng, Junrui Chai, Zengguang Xu, and Yuan Qin	879
Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties—Snehasish Mondal and Krishna Prapoorna Biligiri	892
Comparison Between Destructive and Nondestructive Tests in the Evaluation of Abrasion Resistance of Concrete—A. Meza, J. A. Ortiz, L. Peralta, and C. Sánchez	906
A Novel Triaxial Test System for Concrete under Passive Confinement—JIAFEI JIANG, PINGCHENG XIAO, AND BENBEN LI	913
Assessing Crack Susceptibility of Asphalt Concrete Mixtures with Overlay Tester—Victor M. Garcia, Alejandro Miramontes, Jose Garibay, Imad Abdallah, and Soheil Nazarian	924
Investigation of Asphalt Track Behavior Under Cyclic Loading: Full-Scale Testing and Numerical Simulation—Seong-Hyeok Lee, Hai V. Vo, and Dae-Wook Park	934
Evaluation of Bearing Capacity of Fly-Ash Highway Subgrade Based on Model Test—Wei Cui, Xiao Zheng, and Qian-Qing Zhang	943
Functional Layer Designation of Combined Chip Seal and Slurry Seal in Airport Pavement—Jie Yuan, Siyuan Xu, Xiangdao Hou, Feipeng Xiao, Changshan Jiang, and Yong Luo	956

Experimental Study in the Modification of Mortar Samples with Incorporated Rice Husk—Jiesheng Liu, Faping Li, Xiang He, Xiaofan Liu, and Rongtang Zhang	967
Evaluation of Nano-ZnO Dispersed State in Bitumen with Digital Imaging Processing Techniques—R. Li, Y. Dai, P. Wang, C. Sun, J. Zhang, and J. Pei	974
Utilizing Digital Image Correlation (DIC) in Asphalt Pavement Testing—S. A. SAFAVIZADEH, A. WARGO, AND Y. RICHARD KIM	984
Correlation of Deformation Strain with the Tensile Properties and Fracture Mode of the AA 2014 Alloy Using Simulations and Experiments—T. R. Prabhu	999
Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron—Ş. Yazman, L. Gemi, M. Uludağ, A. Akdemir, M. Uyaner, and D. Dişpinar	1012
Analysis and Prediction for Time Series on Torque Friction of Rolling Bearings—X. XIA, Z. CHANG, Y. LI, L. YE, AND M. QIU	1022
Variable Slip Ratio Rolling Contact Fatigue Tester—Marcellin Zahui, Satyam Deshmukh, and Subodh Subedi	1042
Modeling of Anisotropic Behavior of Aluminum Alloys to Investigate Ductile Fracture for the Improved Formability in the Upsetting Process—H. K. Chirala, M. J. Davidson, G. Srinivasarao, and P. Srinivasaraju	1054
Electromagnetic Crimping in Tube-to-Cylinder Configuration: Influence of the Base Profiles on the Joint Quality—R. Kumar and S. D. Kore	1064
Photocatalytic Activity of N-Doped TiO ₂ to Vehicle Exhaust in Road Tunnel—T. WANG AND T. XU	1076
Accuracy of Heat-Release Rate Measured in Microscale Combustion Calorimetry—H. Guo, R. E. Lyon, and N. Safronava	1090
Research on Load-Spectrum Construction of Automobile Key Parts Based on Monte Carlo Sampling—ML. WANG, XT. LIU, XL. WANG, AND YS. WANG	1099
A Comparative Evaluation Between CABAC and CAVLC—D. AMMOUS, F. KAMMOUN, AND N. MASMOUDI	1111
Performance Evaluation of Standalone Photovoltaic System with Isolated Dual-Inductor dc-dc Converter for Water-Pumping Application—M. Mohammadha Hussaini and A. Josephine Amala	1122
Concert and Analysis of Auto-Tuning Dual-Feedback Biological Harmonic Controller for Industrial Claims—P. M. BALASUBRAMANIAM AND M. SRINIVASAN	1136
PV Module Integrated Dual Boost Isolated dc-dc Converter Fed Three-Phase Micro-Inverter—P. Geetha and S. Ravi	1145
Who Is My Successor? Creating a Mentor–Protégé Selection and Evaluation Model Based on the Views of Mentors—CT. LIN AND TT. CHANG	1158
Principal Component Analysis Based on Marginal Density Ratios—W. SHI AND J. JIANG	1168
The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation—C. Y. Wai, L. L. Sok, M. B. C. Khoo, H. C. Ming, and A. L. J. Xiong	1175
Effective Control Chart for Monitoring the Capability Stability of Non-Normal Processes Having S-Type Quality—Mou-Yuan Liao and Hsiao-Chi Ling	1196
Multi-Objective Genetic Algorithm for Economic Statistical Design of the T ² Control Chart with Variable Sample Size: The Updated Markov Chain Approach—Asghar Seif	1209
Exploring the Links between Task-Level Knowledge Management and Project Success—LR. YANG, JH. CHEN, AND CH. LEE	1220
A Pulse Compression Technique for Improving the Temporal Resolution of Ultrasonic Testing—Jingpin Jiao, Ting Ma, Song Hou, Bin Wu, and Cunfu He	1238
A Strategy for Inspection of Cracks in a Thick Structure Using an ECT Probe—M. Wu, D. Zhang, Z. Chen, and Y. Li	1250
Comparison of Cultivation Methods Impact on Playability of Agrostis stolonifera Greens—K. Dickson, J. Sorochan, G. Munshaw, and A. Thoms	1256
Impact Properties of Multi-Wall Carbon Nanotubes Modified Composites—Y. YUAN, X. YAO, Y. MA, AND B. LIU	1261
REVIEW PAPERS	
Laboratory Performance Evaluation of Reinforced Basalt Fiber in Sealing Asphalt Chips—X. Gu, X. Zhang, J. Lv, Z. Huang, B. Yu, and X. Zou	1269
A Study of the Structural Performance of Flexible Pavements Using Traffic Speed Deflectometer—S. Manoharan, G. Chai, S. Chowdhury, and A. Golding	1280
TECHNICAL NOTE	
Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester— J. Schuurmans	1290
No. 4, July	
Linking Ecology and Service Function in Scenic Road Landscape Planning: A Spatial Analysis Approach—XIAOCHUN QIN, SHENGNAN CUI, AND SHU LIU	1297
Evaluation of Soil Saver Walls on Aquatic Organism Passage Through Box Culverts—Madan Neupane, Robert L. Parsons, Jie Han, David A. Parr, and James A. Jacobe	1313

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers— AMENEH OTADI AND JAVAD TANZADEH	1321
Desaturation for Liquefaction Mitigation Using Biogas Produced by <i>Pseudomonas stutzeri</i> —Erxing Peng, Dingwen Zhang, Wenbo Sun, and Guangyin Du	1333
Optimization of Laboratory Preparation of the Emulsified Bioasphalt with Two Emulsifiers—XI CHEN, HAINIAN WANG, QINGHUA WANG, XU YANG, AND ZHANPING YOU	1343
Effects of Internal Structure on Anisotropic Creep Behavior of Asphalt Mixture Based on User-Defined Three-Dimensional Discrete Element Method—Deyu Zhang, Tao Ma, Xunhao Ding, Weiguang Zhang, and Xiaoming Huang	1355
Rutting Evaluation of Alaskan Asphalt Pavement Containing Sustainable Materials—Sheng Zhao and Jenny Liu	1366
Nature-Inspired Bridge Scour Countermeasures: Streamlining and Biocementation—Junliang Tao, Junhong Li, Xiangrong Wang, and Ruotian Bao	1376
Evaluation for VOF Simulation of Flow Field in Asphalt Foaming Chamber Based on Volume Fraction—Fu-Min Liu, An-Lin Wang, and Zhen-Sheng Fu	1391
Nondestructive Evaluation of Solid Pharmaceutical Products Using Wavelet Transformations and Multispectral Data—Fahima Tahir, Muhammad Abuzar Fahiem, Saima Farhan, and Huma Tauseef	1399
Seismic Isolation Characteristics of a Friction System—BIAO WEI, PENG WANG, XUHUI HE, AND LIZHONG JIANG	1411
Review of Design, Construction, and Capabilities of an Air Bladder Load Test Facility (ABLTF) at BCERL for Structural Experimental Enclosure Studies—Ali M. Memari, Thomas Kuczynski, and Ryan L. Solnosky	1421
Dynamic Fracture Characterization of Cantilever Structure Specimens with V-Notch Tips—Zhongwen Yue, Wang Zhang, Yao Song, Qingwen Hu, and Luzhou Xie	1434
An Optical Fiber Sensor Method for Simultaneously Monitoring Corrosion and Structural Strain Induced by Loading— JIANGHONG MAO, FANGYUAN XU, WEILIANG JIN, QIAN GAO, YIDONG XU, AND CHEN XU	1443
Synthesis and Performance Evaluation of Epoxy Resin–Modified Shape Memory Polyurethane Sealant—Dongya Shen, Shuang Shi, and Tao Xu	1452
Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images—Jack L. Glover, Lawrence T. Hudson, and Nicholas G. Paulter	1462
Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard—Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter	1468
Studying the Statistics of Natural X-ray Pictures—Praful Gupta, Jack L. Glover, Nicholas G. Paulter, Jr., and Alan C. Bovik	1478
Determination of Trace Elements in High Purity Silver Granules Using Sector Field Inductively Coupled Plasma Mass Spectrometry— S. Swarupa Tripathy, Swati, Rajiv K. Saxena, and Nahar Singh	1489
A Novel Approach to Evaluating the Performance of Physical Fitness by Combining Statistical Inference with the Radar Chart—Yun-Tsan Lin, Tsang-Chuan Chang, and Kuen-Suan Chen	1498
Seal Strength Evaluation of Flexible Plastic Films by Machine Testing and Human Peeling—Somporn Nilmanee, Tunyarut Jinkarn, Lerpong Jarupan, Supachai Pisuchpen, and Alaster Yoxall	1508
Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer—Zehra S. Kalkan-Sevinc and Michael T. K. Ling	1518
Guidance for Investigating Calcite Precipitation by Urea Hydrolysis for Geomaterials—B. S. Shashank, James M. Minto, Devendra Narain Singh, Gráinne El Mountassir, and Charles W. Knapp	1527
Experimental Study on Lime and Fly Ash-Stabilized Sintered Red Mud in Road Base—JIAMING ZHANG AND CHANG LI	1539
Fragmentation Evolution and Fractal Characteristics of Deep Rocks by Lab Compression-Shear Tests—Shuyun Zhu, Yun Wu, and Liangliang Lu	1548
Effect of Closely Spaced Twin Tunnel Construction beneath an Existing Subway Station: A Case Study—Xu Zhang, Chengping Zhang, and Jianchen Wang	1559
Dynamic Response of Shallow-Buried Tunnels under Asymmetrical Pressure Distributions—X. L. Jiang, F. F. Wang, H. Yang, P. Y. Lian, J. Chen, J. Y. Niu, and G. C. Sun	1574
Behavioral Characteristics of Group Batter Piles According to Pile Inclination and Action Direction under Statically Lateral Loads—GI-CHUN KANG AND JISEONG KIM	1591
Modification Mechanism and Performance of Qingchuan Rock Asphalt—Modified Asphalt—Limin Li, Zhaoyi He, Weidong Liu, Jianqing Jiang, and Cheng Hu	1610
An Innovative Method for Interpretation of Asphalt Boil Test—Akhtarhusein A. Tayebali, Abhilash Kusam, and Christopher Bacchi	1622
A Test Protocol for Evaluating Absorption of Joints in Concrete Pavements—M. Tiznobaik and M. T. Bassuoni	1636
Experimental Study on the Impact Properties of Concrete Bridge Pier Reinforced with Stainless Steel Rebar—Guoxue Zhang, Ziqing Chen, Juan Lu, Shixiang Xu, and Xiwu Zhou	1650
Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete—Matthew P. Adams, Racheal D. Lute, Edward G. Moffatt, and Jason H. Ideker	1659

Effects of Process Parameters on the Surface Roughness of Stainless Steel 316L Parts Produced by Selective Laser Melting— Derahman Nur Aqilah, Ab Karim Mohd Sayuti, Yusof Farazila, Dambatta Yusuf Suleiman, Mohd Amran Nor Amirah, and Wan Badiuzaman Wan Nur Izzati	1673
Theoretical Prediction of Forming Limit Diagrams for B1500HS Steel at Elevated Temperature Based on Modified Arrhenius and M-K Models—Hongli Hou, Huiping Li, and Lianfang He	1684
Fatigue Crack Growth Testing and Evaluation for Aluminum Alloys at Temperatures of 25°C and -70°C—M. D. LIU AND J. J. XIONG	1698
Pitting Formation in Concave-Convex Gears Manufactured from AISI 8620 Steel—Mahir Uzun, Mehmet Mehdi Münis, and Hayrettin Düzcükoğlu	1708
Relationship between Computed Rate Constants and the Variability in Maturity-Based Strength Predictions—Chang Hoon Lee and Kenneth C. Hover	1715
A New Mixed Poisson Distribution: Modeling and Applications—MINA HABIBI AND AKBAR ASGHARZADEH	1728
TECHNICAL NOTE	
Alternative Setup Apparatus to Test ASTM A944-10 Beam-End Specimens—Basso Trujillo Pasquale, René Malo, and Marc Jolin	1741
No. 5, September	
Evaluating the Effect of High RAP Content on Asphalt Mixtures and Binders Fatigue Behavior—Umme Amina Mannan, Hasan M. Faisal, MD Mehedi Hasan, and Rafiqul A. Tarefder	1749
A Study on the Effect of Plasma Treatment on Thermal Comfort Properties of Cotton Fabric—A. Jebastin Rajwin and C. Prakash	1762
Comparison of Mode II Fracture Toughness Test Methods for Wood and Wood-Based Composites—MILAD MOHAMADZADEH AND DANIEL HINDMAN	1770
Effect of Impact Energy in ESSO Test (Part 2: Proposal of Validity Criteria of Impact Condition in ESSO Test by FEM Crack Propagation Analysis—Masahito Kaneko, Tomoya Kawabata, and Shuji Aihara	1782
Performance, Combustion and Emission Characteristics of CI Engine Fueled with Sweet Lime Peel Oil (Citrus Limetta)—G. Logesh and Venkataramanan Madhavan	1799
Standard Testing of Glass Revisited - Experimental and Theoretical Aspects—David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica	1819
Implementation of PV System Integrated DSTATCOM with Modified UVT Control Scheme for Harmonic and Neutral Current Elimination—P. GOVINDASAMY AND R. ANITA	1832
A Design of an Instrument Based on a Piezoelectric Actuator to Study the Force Output of Piezoelectric Ceramic—Zhichao Pei, Weibin Rong, Lefeng Wang, Shupeng Wang, and Lining Sun	1852
Development of Accelerated Durability Tests for Rear Suspension Components under Failure-Correlated Load—Li-Hui Zhao, Jia-Wei Yu, Tie Chen, Jun Li, and Song-Lin Zheng	1862
Assessment of Stress-Strain Behavior of Corroded Steel Reinforcement Using Digital Image Correlation (DIC)—Ranjitha Rajagopal, Sameer Sharma, Radhakrishna G. Pillai, and Sankara J. Subramanian	1874
Effect of Silver Addition on Mechanical Properties and Stress Corrosion Cracking in a Predeformed and Overaged 7055 Aluminum Alloy —Mehdi Shakouri, Mohammad Esmailian, and Saeed Shabestari	1891
Field Evaluation of Load-Bearing Capacity of Tire Fill Embankment Pavements—Leila Hashemian and Alireza Bayat	1901
Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System— Prashanth Swaminathan and Gopalakrishna Keshavanarayana	1911
Development of High Temperature Mechanical Rig for Characterizing the Viscoplastic Properties of Alloys Used in Solid Oxide Cells— Tesfaye Tadesse Molla, Fabio Greco, Kawai Kwok, Philipp Zielke, and Henrik Lund Frandsen	1918
Assessment of Hazardous Substances in Electrical Cables: Implementation of RoHS Regulations in India—U. Rambabu, V. Balaram, R. Ratheesh, S. Chatterjee, M. Kishore Babu, and N. R. Munirathnam	1930
Preliminary Investigation of Predicting Permanent Deformations of Unbound Granular Materials Using Miniaturized Pressuremeter Cyclic Data—Alaa M. Shaban and Paul J. Cosentino	1942
Early Age Thermal Measurements of Soil-Cement Mixtures for Quality Control during Paving—W. Griffin Sullivan, Isaac L. Howard, Tim Cost, and Jay Shannon	1957
Energy-Based Forming Mechanism and Criterion for Zonal Disintegration—Xuguang Chen, Ning Zhang, Mingsheng Zhang, Xiaodong Niu, and Yanlong Li	1972
Cohesive Property Evaluation of Crack Sealants Using a Low-Temperature Tensile Tester—Hengxiao Xue, Liping Cao, Xiangchen Hou, and Yiqiu Tan	1983
Exact Analytical Durometer Hardness Scale Interconversion—P. H. GILBERT AND A. J. GIACOMIN	1995
Determination of the Thermal Conductivity Tensor of Thermally Orthotropic Materials with Transient Line Heat Source Method—BAO CHEN, YIYI HUANG, KANG ZHANG, AND YUJUN CUI	2033
Using the DEMATEL Method to Explore the Critical Factors That Influence Visitors to Purchase Museum Cultural Products— CHIN-TSAL LIN. CHUAN LEE, SIH-WUN WANG, AND YI-HSUEH CHEN	2045

Using a Polymer-Based Sealant Material to Make Crack Repair of Asphalt Pavement—Jian Yin, Qiling Pang, Hao Wu, and Weimin Song	2056
Modeling of Permeation and Fracturing Grouting in Sand: Laboratory Investigations—Wen-Chieh Cheng, James C. Ni, Jack S. Shen, and Zhi-Feng Wang	2067
An Experimental Study of the Performance of Two-Component Backfilling Grout Used behind the Segmental Lining of a Tunnel-Boring Machine—Mohammad Sharghi, Hamid Chakeri, Hassan Afshin, and Yilmaz Ozcelik	2083
Evaluation of Segregation in Asphalt Pavement Surface Using Concave Multifractal Distribution—Mao-ping Ran, Shenqing Xiao, Xing-lin Zhou, and Wang-xin Xiao	2100
Fracture-Toughness and Fatigue Crack Growth Evaluation in the Transversal Direction of the Longitudinal Weld of an API X52 Steel Pipeline—D. ANGELES-HERRERA, A. ALBITER, R. CUAMATZI-MELÉNDEZ, G. TERÁN, AND GILBERTO OCHOA-RUIZ	2110
Evaluation of Asphalt Effect on Water Quality Using Leaching Test and Molecular Simulation—Jun Chen, Hao Wang, Jiantao Wu, and Guangji Xu	2121
Iterative Kernel Principal Component for Large-Scale Data Set—Weiya Shi	2130
Case Study: Evaluation of the Effect of Extraction Temperature on WMA Binder Containing Sasobit Additive—Shenghua Wu, Weiguang Zhang, Shihui Shen, and Balasingam Muhunthan	2140
DNT-Based Image Illumination Refinement System with Concurrent Copyright Embedding—Jung-San Lee and Yi-Hua Wang	2151
A New Class of Beta-Complementary Exponential Power Series Distributions—E. MAHMOUDI, R. S. MESHKAT, AND M. ENTEZARI	2171
Estimation of the Stress Strength Parameter for the Generalized Exponential-Poisson Distribution—S. Nadarajah, S. F. Bagheri, M. Alizadeh, and E. Bahrami Samani	2184
Effect of Impact Energy in the Esso Test—Part 1: Basic Experiments and Validation of FEM Analysis—Tomoya Kawabata, Masahito Kaneko, and Shuji Aihara	2203
Soil Arching Effect Analysis via a Modified Finite Element Model Based on a Field Test—XIANGDONG LI, YU MIAO, AND KE CHENG	2218
Evaluating the Best Outsourcing Service Country in the Southeast Asian Region: A Fuzzy-AHP Approach—Van Kien Pham, Anh Tho Truong Hoang, and Ha Le Thi Thanh	2227
REVIEW PAPERS	
Decision Support System for Management Decision in High-Risk Business Environment—MING-Fu Hsu and Chung-I Huang	2240
Fatigue Performance of Vertical Vibration Compacted Cement-Stabilized Recycled Pavement Materials—Yingjun Jiang, Haipeng Liu, and Jinshun Xue	2251
Numerical Analysis of Magnetic Flux Leakage of Transverse Defects of Sucker Rod—Ou Zhang, Xueye Wei, and Shuxin Yan	2265
Postweld Heat Treatment Characterization of Mild Steel (E6013) Welded Areas Using Wavelet Transform of Ultrasonic Testing Signals —Tariq M. R. Khan, Amna Maqsood, Saad A. Warraich, and Saeed Khalid	2274
No. 6, November	
Textural and Geometrical Features Based Approach for Identification of Individuals Using Palmprint and Hand Shape Images from Multiple Multimodal Datasets—Anum Shaukat, Saima Farhan, Muhammad Abuzar Fahiem, Huma Tauseef, Fahima Tahir, and Ghousia Usman	2281
Manihot esculenta Peel Powder: Effective Adsorbent for Removal of Various Textile Dyes from Aqueous Solutions—C. Parvathi, U. S. Shoba, C. Prakash, and S. Sivamani	2299
Model Test of the Long-Term Behavior of a Pile-Net Structure Subgrade for Highspeed Railways—XILIN LÜ, QUAN MA, LINLONG MU, AND HANG FANG	2311
Evolution of the Temperature Field of the Subgrade in the Permafrost Regions of the Great Khingan Mountains—Haiping Liu, Lin Ding, Yang Yang, Meng Guo, and Yiqi Wang	2319
Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles—WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and Dafu Cao	2330
Ultimate Lateral Resistance of Quadrangle Array Piles Using the Strain Wedge Model on Soil Subgrade—Jiseong Kim and Gi-Chun Kang	2339
Rheological Characteristics of Fine-Grained Soil-Slurries—RAKSHITH SHETTY AND DEVENDRA NARAIN SINGH	2351
Improvement of Energy Efficiency Using a Multi-Input Fuzzy Logic Controller in a Stone Cutting Machine—Said Mahmut Cinar, Hasan Cimen, and I. Sedat Buyuksagis	2364
Experimental Study on Impact Crushing of Granite Particles—Jian-Hong Yang, Qi Chen, Jian-Hua Zhou, and Huai-ying Fang	2376
Wear Resistance of Four Rocks Using Rotary Abrasion Test in Dry and Wet Conditions—Taegeon Lee, Seung Oh Lee, Dong-Woo Ryu, and Heejung Youn	2389
Advanced Method for Quantifying Socket Roughness and Empirical Correlations—Byeong-Han Jeon, Chae-Min Kim, and Yongkyu Choi	2399
Microcrack Growth Behavior and CWFS Criterion Parameters Optimization of Granite with PFC—Shengjun Miao, Hui Wang, Xuelian Guo, Mingchun Liang, and Changqing Kong	2412

Charpy Impact Test Methods for Cementitious Composites: Review and Commentary—Robert J. Thomas and Andrew D. Sorensen	2422
Investigation of the Synthesized Retarder on Cement Slurry Hydration Based on Low Field NMR—ZHIGANG PENG, JINHUA HUO, ZHONGBIN YE, RUI ZHANG, AND QIAN FENG	2431
Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique—Surya Pratap Singh and Krishna Prapoorna Biligiri	2440
Prediction of Mechanical Performance of Cemented Paste Backfill by the Electrical Resistivity Measurement—Wenbin Xu, Xichun Tian, and Changbing Wan	2450
Sampling Concrete from a Revolving Drum Truck Mixer—John J. Schemmel, Tiffany N. Kolba, Michael P. Salguero, and Matthew West	2459
Fatigue Damage Characteristics Considering the Difference of Tensile-Compression Modulus for Asphalt Mixture—Songtao Lv, Xiaoyang Wang, Chaochao Liu, and Shuangshuang Wang	2470
Nonrecoverable Compliance and Recovery Behavior of Polymer-Modified and Reclaimed Asphalt Pavement–Modified Binders in Arkansas—Mohammed Ziaur Rahaman, Zahid Hossain, and Musharraf Zaman	2483
Nanosized Morphology and Mechanical Properties of Recovered Binders from Weathered Asphalt Mixtures—Yan Liu, Junan Shen, Pengcheng Shi, Hong Zhu, and Qiju Gao	2498
Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation— SAMPAT KEDARISETTY, GOURAB SAHA, KRISHNA PRAPOORNA BILIGIRI, AND JORGE B. SOUSA	2511
Creep Fatigue Interaction under Different Test Variables: Mechanics and Mechanisms—Kaustav Barat, S. Sivaprasad, S. Kar, and S. Tarafder	2521
Behavior and Law of Crack Propagation in the Dynamic-Static Superimposed Stress Field—Renshu Yang, Chenxi Ding, Liyun Yang, Yufei Zhang, and Peng Xu	2540
Response Surface Methodology for the Remaining Creep Life Estimation by the Small Punch Creep Test—Ali Moradi and Nasser Soltani	2549
Kinematic Errors on a C-Type Gear with a Parabolic Surface—HSUEH-CHENG YANG AND CHING-SHENG CHANG	2557
Testing and Evaluation of Bond Surface Profile Influencing the CFRP Strengthening of Steel Members—A. CYRIL THOMAS AND K. BASKAR	2569
The Effects of Anisotropic Yield Functions on Plastic Behavior of 304 Stainless Steel—Bora Sener and Mehmet Emin Yurci	2584
Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy—Muhammet Uludağ, Şakir Yazman, Lokman Gemi, Barış Bakırcıoğlu, Eray Erzi, and Derya Dispinar	2592
A Simple Approach to Performing Large Strain Cyclic Simple Shear Tests: Methodology and Experimental Results—WAQAS MUHAMMAD, JIDONG KANG, RAJA K. MISHRA, AND KAAN INAL	2604
Determination of the Cavitation Range of Power Ultrasound in an Aluminum Alloy Melt—Sichao Su, Xiaoqian Li, Ruiqing Li, and Wu Zhang	2616
Pulsed Eddy Current Applied to Measure Residual Stress in Welding—Abbas Habibalahi, Masoumeh Habibalahi, and Kaveh Samadian	2623
Optimization Analysis of Retrial Machine Repair Problem with Server Breakdown and Threshold Recovery Policy— Kuo-Hsiung Wang, Tseng-Chang Yen, and Jia-Yu Chen	2630
Relationship among Market Value Added, Cash Value Added, and Corporate Governance: A Case of Taiwan during 2011–2012— MAO-CHANG WANG	2641
Testing Behavior of the Mean Inactivity Time—M. KAYID AND S. IZADKHAH	2649
Interval Estimation of Quantile Difference in the Two-Parameter Exponential Distributions—AYMAN BAKLIZI	2654
Production of <i>Garcinia gummi-gutta</i> Methyl Ester (GGME) as a Potential Alternative Feedstock for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics—Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac Joshuaramesh Lalvani	2661
Characteristic Analysis of Welding Crack Acoustic Emission Signals Using Synchrosqueezed Wavelet Transform—Kuanfang He, Qi Li, and Qing Yang	2679
Combined Effect of Heat Storage, Reflective Material, and Additional Heat Source on the Productivity of a Solar Still—Techno-Economic Approach—D. DSILVA WINFRED RUFUSS, S. INIYAN, AND L. SUGANTHI	2692
REVIEW PAPER	
MRI Images Segmentation and 3D Reconstruction for Cerebral Cancer Detection—Nadia Smaoui Zghal and Nabil Derbel	2707
TECHNICAL NOTE	
Effect of Sample Reconstitution Methods on the Behaviors of Granular Materials under Shearing—Yao Li, Yunming Yang, Hai-Sui Yu, and Gethin Roberts	2718

Journal of Testing and Evaluation Author Index to Volume 46 2018

Number	Month of Issue	Pages
1	January	1-434
2	March	435-850
3	May	851-1296
4	July	1297-1748
5	September	1749-2280
6	November	2281-2780

A

Abdallah, Imad: see Garcia, Victor M.

Abuel-Naga, H. M., Shaia, H. A., and Bouazza, A.: Effect of Surface Roughness and Hardness of Continuum Materials on Interface Shear Strength of Granular Materials, Mar., 826

Adams, Matthew P., Lute, Racheal D., Moffatt, Edward G., and Ideker, Jason H.: Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete, Jul., 1659

Afshin, Hassan: see Sharghi, Mohammad

Aihara, Shuji: see Kaneko, Masahito

see Kawabata, Tomoya

Akdemir, A.: see Yazman, Ş.

Albiter, A.: see Angeles-Herrera, D.

Ali, N. S. A.: On the Properties of the UBAC(2) Class of Life Distributions, Mar., 730

Alizadeh, M.: see Nadarajah, S.

Amala, A. Josephine: *see* Hussaini, M. Mohammadha

Ambriško, L. and Pešek, L.: Evaluation of Fracture Tearing Resistance of Dissimilar Metal Welds in Laser Welded Thin Steel Sheets, Mar., 842

Amirah, Mohd Amran Nor: see Aqilah, Derahman Nur

Ammous, D., Kammoun, F., and Masmoudi, N.: A Comparative Evaluation Between CABAC and CAVLC, May, 1111

An, Guanfeng: see Yu, Jiangmiao

Angeles-Herrera, D., Albiter, A., Cuamatzi-Meléndez, R., Terán, G., and Ochoa-Ruiz, Gilberto: Fracture-Toughness and Fatigue Crack Growth Evaluation in the Transversal

Direction of the Longitudinal Weld of an API X52 Steel Pipeline, Sep., 2110

Anil Kumar Naik, B. and Vinod, A. V.: Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids, Mar., 445

Anita, R.: see Govindasamy, P.

see Tamilselvan, K.

Annamalai, K.: see Lingesan, Subramani

Aqilah, Derahman Nur, Sayuti, Ab Karim Mohd, Farazila, Yusof, Suleiman, Dambatta Yusuf, Amirah, Mohd Amran Nor, and Izzati, Wan Badiuzaman Wan Nur: Effects of Process Parameters on the Surface Roughness of Stainless Steel 316L Parts Produced by Selective Laser Melting, Jul., 1673

Asgharzadeh, Akbar: see Habibi, Mina

Ashour, Ashraf F.: see Ge, WenJie

Aslam, M.: see Butt, K. A.

Awang, A. Z.: see Lee, H.-P.

В

Böröcz, Péter: Vibration Levels in Vans as a Function of Payload and Leaf Spring Sheet Number, Jan., 236

Bacchi, Christopher: *see* Tayebali, Akhtarhusein A.

Bagheri, S. F.: see Nadarajah, S.

Bai, M.: see Du, Y.

Bai, Pengxiang: see Lei, Dong

Bakhshi, B.: see Khiavi, A. K.

Bakircioğlu, Barış: see Uludağ, Muhammet

Baklizi, Ayman: Interval Estimation of Quantile Difference in the Two-Parameter Exponential Distributions, Nov., 2654

Balaram, V.: see Rambabu, U.

Balasubramaniam, P. M. and Srinivasan, M.: Concert and Analysis of Auto-Tuning Dual-Feedback Biological Harmonic Controller for Industrial Claims, May, 1136

Bao, Ruotian: see Tao, Junliang

Barat, Kaustav, Sivaprasad, S., Kar, S., and Tarafder, S.: Creep Fatigue Interaction under Different Test Variables: Mechanics and Mechanisms, Nov., 2521

Baskar, K.: see Cyril Thomas, A.

see Senthil Kumar, K.

Bassuoni, M. T.: see Bediwy, A.

see Tiznobaik, M.

Bayat, A.: see Hasanuzzaman, M.

Bayat, Alireza: see Hashemian, Leila

Bediwy, A. and Bassuoni, M. T.: Resistivity, Penetrability and Porosity of Concrete: A Tripartite Relationship, Mar., 549

Behnia, Behzad, Buttlar, William G., and Reis, Henrique: Nondestructive Acoustic Emission Test to Evaluate Thermal Damage in Asphalt Concrete Materials, Jan., 118

Bennert, T.: see Wang, H.

Beynon, J. H.: see Kariem, M. A.

Biligiri, Krishna Prapoorna: see Kedarisetty, Sampat

see Mondal, Snehasish

see Singh, Surya Pratap

Bouazza, A.: see Abuel-Naga, H. M.

Bovik, Alan C.: see Gupta, Praful

Boz, I.: see Tavassoti-Kheiry, P.

Buss, Ashley, Elkashef, Mohamed, and Stephenson, W. Robert: Extracting More from Dynamic Modulus Data Using Split-Plot Repeated Measures Analysis, Jan., 351

Butt, K. A., Aslam, M., Wang, F.-K., Lee, H., and Jun, C.-H.: Evaluation of Two Process Yields in Acceptance Sampling Plans, Mar., 756

Buttlar, William G.: see Behnia, Behzad

Buyuksagis, I. Sedat: see Cinar, Said Mahmut

C

Cai, Chen: see Ge, WenJie

Cai, Wenlu: see Wang, Xiaojuan

Cao, DaFu: see Ge, WenJie

Cao, Dongwei: see Li, Mingliang

Cao, Liping: see Xue, Hengxiao

Carrow, R. N.: see Straw, C. M.

Casado, J. A.: see Demian, C.

Chai, G.: see Manoharan, S.

Chai, Junrui: see Feng, Shangxin

Chakeri, Hamid: see Sharghi, Mohammad

Chang, Ching-Sheng: see Yang, Hsueh-Cheng

Chang, L.-C.: see Chung, K.-C.

Chang, T.-T.: see Lin, C.-T.

Chang, Tsang-Chuan: see Lin, Yun-Tsan

Chang, Z.: see Xia, X.

Chatterjee, S.: see Rambabu, U.

Chen, Bao, Huang, Yiyi, Zhang, Kang, and Cui, Yujun: Determination of the Thermal Conductivity Tensor of Thermally Orthotropic Materials with Transient Line Heat Source Method, Sep., 2033

Chen, J.: see Jiang, X. L.

Chen, J.-H.: see Yang, L.-R.

Chen, Jia-Yu: see Wang, Kuo-Hsiung

Chen, Jun, Wang, Hao, Wu, Jiantao, and Xu, Guangji: Evaluation of Asphalt Effect on Water Quality Using Leaching Test and Molecular Simulation, Sep., 2121

Chen, Kuen-Suan: see Lin, Yun-Tsan

Chen, M.: see Zhang, D.

Chen, Qi: see Yang, Jian-hong

Chen, Tie: see Zhao, Li-Hui

Chen, Xi, Wang, Hainian, Wang, Qinghua, Yang, Xu, and You, Zhanping: Optimization of Laboratory Preparation of the Emulsified Bioasphalt with Two Emulsifiers, Jul., 1343

Chen, Xuguang, Zhang, Ning, Zhang, Mingsheng, Niu, Xiaodong, and Li, Yanlong: Energy-Based Forming Mechanism and Criterion for Zonal Disintegration, Sep., 1972

Chen, Y.: see Du, Y.

Chen, Yi-Hsueh: see Lin, Chin-Tsai

Chen, Z.: see Wu, M.

Chen, Zhenmao: see Wang, Xiaojuan

see Wu, Meixian

Chen, Ziqing: see Zhang, Guoxue

Cheng, C., Sui, Y., Feng, K., Qi, J., He, Y., Meng, Q., Wei, F., and Sun, Z.: Effect of Aluminum Content on Interfacial Reaction of Directionally Solidified TiAl Alloys, Mar., 764

Cheng, Ke: see Li, Xiangdong

Cheng, Wen-Chieh, Ni, James C., Shen, Jack S., and Wang, Zhi-Feng: Modeling of Permeation and Fracturing Grouting in Sand: Laboratory Investigations, Sep., 2067

Cherian, T.: see Golait, Y. S.

Chirala, H. K., Davidson, M. J., Srinivasarao, G., and Srinivasaraju, P.: Modeling of Anisotropic Behavior of Aluminum Alloys to Investigate Ductile Fracture for the Improved Formability in the Upsetting Process, May, 1054

Chiu, Y. T.: see Pearn, W. L.

Choi, Yongkyu: see Jeon, Byeong-Han

Chowdhury, S.: see Manoharan, S.

Chuah, M. H.: see Yeong, W. C.

Chung, K.-C. and Chang, L.-C.: A Sustainability Strategy Assessment Framework Model for Medical Tourism Supply Chain in Asia, Mar., 745

Cimen, Hasan: see Cinar, Said Mahmut

Cinar, Said Mahmut, Cimen, Hasan, and Buyuksagis, I. Sedat: Improvement of Energy Efficiency Using a Multi-Input Fuzzy Logic Controller in a Stone Cutting Machine, Nov., 2364

Cline, V.: see Straw, C. M.

Cordeiro, G. C., Paiva, O. A., Toledo Filho, R. D., Fairbairn, E. M. R., and Tavares, L. M.: Long-Term Compressive Behavior of Concretes with Sugarcane Bagasse Ash as a Supplementary Cementitious Material, Mar., 564

Cosentino, Paul J.: see Shaban, Alaa M.

Cost, Tim: see Sullivan, W. Griffin

Covitch, M. J.: An Improved Method for Calculating Viscosity Index (VI) of Low Viscosity Base Oils, Mar., 820

Cuamatzi-Meléndez, R.: see Angeles-Herrera, D.

Cui, Shengnan: see Qin, Xiaochun

Cui, Wei, Zheng, Xiao, and Zhang, Qianqing: Evaluation of Bearing Capacity of Fly-Ash Highway Subgrade Based on Model Test, May, 943

Cui, X., Zhou, X., Lou, J., Zhang, J., and Ran, M.: Depth-from-Focus-Based 3D Reconstruction of Asphalt Pavement Micro-Texture, Jan., 419

Cui, Yujun: see Chen, Bao

Cyril Thomas, A. and Baskar, K.: Testing and Evaluation of Bond Surface Profile Influencing the CFRP Strengthening of Steel Members, Nov., 2569

D

Düzcükoğlu, Hayrettin: see Uzun, Mahir

Dai, Y.: see Li, R.

Davidson, M. J.: see Chirala, H. K.

Demian, C., Ferreño, D., Ruiz, E., and Casado, J. A.: Study of the Efficiency and

Temperature Loss Caused by Degassing and Filtration of AlSi₉Cu₃ Alloy, Mar., 772

Derbel, Nabil: see Zghal, Nadia Smaoui

Deshmukh, Satyam: see Zahui, Marcellin

Dhinesh, B.: see Lingesan, Subramani

Dişpinar, D.: see Yazman, Ş.

Dickson, K., Sorochan, J., Munshaw, G., and Thoms, A.: Comparison of Cultivation Methods Impact on Playability of *Agrostis stolonifera* Greens, May, 1256

Ding, Chenxi: see Yang, Renshu

Ding, Lin: see Liu, Haiping

Ding, Xunhao: see Zhang, Deyu

Dispinar, Derya: see Uludağ, Muhammet

Du, Cheng-chao: see Wang, Xiao

Du, Guangyin: see Peng, Erxing

Du, Y., Bai, M., Chen, Y., Wang, X., and Li, Z.: Experimental Study of Micropile Lateral Resistance Effectiveness, Mar., 523

E

Eligehausen, R.: see Mahrenholtz, P.

Elkashef, Mohamed: see Buss, Ashley

Entezari, M.: see Mahmoudi, E.

Erzi, Eray: see Uludağ, Muhammet

Esmailian, Mohammad: *see* Shakouri, Mehdi

Eswaramoorthi, R. and Singaravel, G.: Improved Artificial Bee Colony Optimization Approach in UWBOFDM for Frequency Offset Estimation, Jan., 317

F

Fahiem, M. A.: see Usman, G.

Fahiem, Muhammad Abuzar: see Shaukat, Anum

see Tahir, Fahima

Fairbairn, E. M. R.: see Cordeiro, G. C.

Faisal, Hasan M.: see Mannan, Umme Amina

Fallahnezhad, Mohammad Saber: see Rasay, Hasan

Fan, Yongjun: see Li, Mingliang

Fang, Hang: see Lü, Xilin

Fang, Huai-ying: see Yang, Jian-hong

Farazila, Yusof: see Aqilah, Derahman Nur

Farhan, M.: see Tariq, F.

Farhan, S.: see Usman, G.

Farhan, Saima: see Shaukat, Anum

see Tahir, Fahima

Fazhou, Wang: see Yunpeng, Liu

Feng, K.: see Cheng, C.

Feng, Qian: see Peng, Zhigang

Feng, Shangxin, Chai, Junrui, Xu, Zengguang, and Qin, Yuan: Evaluating the Mesostructural Changes of Laboratory Created Soil-Rock Mixtures Using a Seepage Test Based on NMR Technology, May, 879

Ferreño, D.: see Demian, C.

Forquin, P.: see Saadati, M.

Frandsen, Henrik Lund: *see* Molla, Tesfaye Tadesse

Fu, Zhen-Sheng: see Liu, Fu-Min

G

Gao, C.: see Wang, Y.

Gao, Qian: see Mao, Jianghong

Gao, Qiju: see Liu, Yan

Gao, Y.: see Liu, W.

Garcia, Victor M., Miramontes, Alejandro, Garibay, Jose, Abdallah, Imad, and Nazarian, Soheil: Assessing Crack Susceptibility of Asphalt Concrete Mixtures with Overlay Tester, May, 924

Garibay, Jose: see Garcia, Victor M.

Ge, WenJie, Cai, Chen, Ji, Xiang, Ashour, Ashraf F., and Cao, DaFu: Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles, Nov., 2330

Ge, Zhesheng: see Yu, Jiangmiao

Geetha, P. and Ravi, S.: PV Module Integrated Dual Boost Isolated dc-dc Converter Fed Three-Phase Micro-Inverter, May, 1145

Gemi, L.: see Yazman, Ş.

Gemi, Lokman: see Uludağ, Muhammet

Giacomin, A. J.: see Gilbert, P. H.

Gilbert, P. H. and Giacomin, A. J.: Exact Analytical Durometer Hardness Scale Interconversion, Sep., 1995

Glover, Jack L.: see Gupta, Praful

Glover, Jack L., Hudson, Lawrence T., and Paulter, Nicholas G.: Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images, Jul., 1462

Glover, Jack L., Tosh, Ronald E., Hudson, Lawrence T., and Paulter, Nicholas G.: Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard, Jul., 1468

Golait, Y. S., Padade, A. H., and Cherian, T.: Prediction of Quantitative Response of Under-Reamed Anchor Piles in Soft Clay Using Laboratory Model Study, Mar., 507

Golding, A.: see Manoharan, S.

Gope, Prakash Chandra, Kumar, Harshit, and Purohit, Himanshu: Effect of Tensile or Compressive Overload on the Fatigue Crack Growth of Friction Stir Welded 19501 Aluminum Alloy, Jan., 394

Govindasamy, P. and Anita, R.: Implementation of PV System Integrated DSTATCOM with Modified UVT Control Scheme for Harmonic and Neutral Current Elimination, Sep., 1832

Greco, Fabio: see Molla, Tesfaye Tadesse

Gu, X., Zhang, X., Lv, J., Huang, Z., Yu, B., and Zou, X.: Laboratory Performance Evaluation of Reinforced Basalt Fiber in Sealing Asphalt Chips, May, 1269

Guo, H., Lyon, R. E., and Safronava, N.: Accuracy of Heat-Release Rate Measured in Microscale Combustion Calorimetry, May, 1090

Guo, Meng: see Liu, Haiping

Guo, Xuelian: see Miao, Shengjun

Gupta, Praful, Glover, Jack L., Paulter, Nicholas G. Jr., and Bovik, Alan C.: Studying the Statistics of Natural X-ray Pictures, Jul., 1478

Gupta, R.: see Walker, K.

Н

Habibalahi, Abbas, Habibalahi, Masoumeh, and Samadian, Kaveh: Pulsed Eddy Current Applied to Measure Residual Stress in Welding, Nov., 2623

Habibalahi, Masoumeh: see Habibalahi, Abbas

Habibi, Mina and Asgharzadeh, Akbar: A New Mixed Poisson Distribution: Modeling and Applications, Jul., 1728

Haider, Syed Muhammad Kumail: *see* Hassan, Muhammad Aqib

Han, B.: see Yang, W.

Han, Jie: see Neupane, Madan

Hasan, Md Mehedi: see Mannan, Umme Amina

Hasanuzzaman, M., Hashemian, L., and Bayat, A.: Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications, Jan., 88

Hashemian, L.: see Hasanuzzaman, M.

Hashemian, Leila and Bayat, Alireza: Field Evaluation of Load-Bearing Capacity of Tire Fill Embankment Pavements, Sep., 1901

Hassan, M. KH.: A New Application of Beta Gompertz Distribution in Reliability, Mar., 736

Hassan, Muhammad Aqib, Mehdi, Muhammad, Owais, Muhammad, Nasir, Muhammad, and Haider, Syed Muhammad Kumail: Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability Evaluation of AISI-8620 Case-Hardening Steel, Jan., 305

Hatami, Behzad, Ramezanianpour, Amir Mohammad, and Saedi Daryan, Amir: Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete, Jan., 141

He, Cunfu: see Jiao, Jingpin

He, Jintao: see Lei, Dong

He, Kuanfang, Li, Qi, and Yang, Qing: Characteristic Analysis of Welding Crack Acoustic Emission Signals Using Synchrosqueezed Wavelet Transform, Nov., 2679

He, Lianfang: see Hou, Hongli

He, M. and Yang, T.: Non-Destructive Evaluation of the Bending-Fatigue Damage in Carbon-Fiber-Composite Laminates Based on Ultrasonic Wave Propagation, Mar., 647

He, Xiang: see Liu, Jiesheng

He, Xuhui: see Wei, Biao

He, Y.: see Cheng, C.

He, Zhaoyi: see Li, Limin

Henry, G. M.: see Straw, C. M.

Heo, J.: see Lee, C.-H.

Hild, F.: see Saadati, M.

Hindman, Daniel: see Mohamadzadeh, Milad

Hoang, Anh Tho Truong: see Pham, Van Kien

Hojjat, V.: see Khiavi, A. K.

Hossain, Zahid: see Rahaman, Mohammed Ziaur

Hou, Hongli, Li, Huiping, and He, Lianfang: Theoretical Prediction of Forming Limit Diagrams for B1500HS Steel at Elevated Temperature Based on Modified Arrhenius and M–K Models, Jul., 1684

Hou, Song: see Jiao, Jingpin

Hou, Xiangchen: see Xue, Hengxiao

Hou, Xiangdao: see Yuan, Jie

Hover, Kenneth C.: see Lee, Chang Hoon

Howard, Isaac L.: see Sullivan, W. Griffin

Hsu, Ming-Fu and Huang, Chung-I: Decision Support System for Management Decision in High-Risk Business Environment, Sep., 2240

Hsu, T.-Y.: see Lin, S.-Y.

Hu, Cheng: see Li, Limin

Hu, Lei: see Wang, Xiao

Hu, Qingwen: see Yue, Zhongwen

Huang, Chung-I: see Hsu, Ming-Fu

Huang, Xiaoming: see Zhang, Deyu

Huang, Yishuo: see Lee, Ming-Ju

Huang, Yiyi: see Chen, Bao

Huang, Z.: see Gu, X.

Hudson, Larry: The Case for Technical Performance Standards for Radiation Inspection Systems, Jan., 8

Hudson, Lawrence T.: see Glover, Jack L.

Huo, Jinhua: see Peng, Zhigang

Hussaini, M. Mohammadha and Amala, A. Josephine: Performance Evaluation of Standalone Photovoltaic System with Isolated Dual-Inductor dc-dc Converter for Water-Pumping Application, May, 1122

I

Ideker, Jason H.: see Adams, Matthew P.

Inal, Kaan: see Muhammad, Waqas

Iniyan, S.: see Rufuss, D. Dsilva Winfred

Ito, Masato: see Pramudita, Jonas A.

Izadkhah, S.: see Kayid, M.

Izzati, Wan Badiuzaman Wan Nur: see Aqilah, Derahman Nur

J

Jacobe, James A.: see Neupane, Madan

Jarupan, Lerpong: see Nilmanee, Somporn

Jebastin Rajwin, A. and Prakash, C.: A Study on the Effect of Plasma Treatment on Thermal Comfort Properties of Cotton Fabric, Sep., 1762

Jelagin, D., Saadati, M., Jerjen, I., and Larsson, P.-L.: Mechanical Characterization of Granite Rock Materials: On the Influence from Pre-Existing Defects, Mar., 540

Jeon, Byeong-Han, Kim, Chae-Min, and Choi, Yongkyu: Advanced Method for Quantifying Socket Roughness and Empirical Correlations, Nov., 2399

Jeong, M. M.: see Mensching, D. J.

Jerjen, I.: see Jelagin, D.

Ji, G.: see Wang, Y.

Ji, Xiang: see Ge, WenJie

Jiang, Changshan: see Yuan, Jie

Jiang, J.: see Shi, W.

Jiang, Jiafei, Xiao, Pingcheng, and Li, Benben: A Novel Triaxial Test System for

Concrete under Passive Confinement, May, 913

Jiang, Jianqing: see Li, Limin

Jiang, Lizhong: see Wei, Biao

Jiang, P.: see Yang, W.

Jiang, X. L., Wang, F. F., Yang, H., Lian, P. Y., Chen, J., Niu, J. Y., and Sun, G. C.: Dynamic Response of Shallow-Buried Tunnels under Asymmetrical Pressure Distributions, Jul., 1574

Jiang, Yingjun, Liu, Haipeng, and Xue, Jinshun: Fatigue Performance of Vertical Vibration Compacted Cement-Stabilized Recycled Pavement Materials, Sep., 2251

Jiao, Jingpin, Ma, Ting, Hou, Song, Wu, Bin, and He, Cunfu: A Pulse Compression Technique for Improving the Temporal Resolution of Ultrasonic Testing, May, 1238

Jiao, T.: see Nie, Z.-H.

Jin, Weiliang: see Mao, Jianghong

Jingle Jabha, D. F., Selvi, K., and Joselin, R.: A Strategy to Determine Partial Discharge in XLPE Power Cables Using Acoustic Emission Detection Technique, Jan., 283

Jinkarn, Tunyarut: see Nilmanee, Somporn

Jolin, Marc: see Trujillo Pasquale, Basso

Joselin, R.: see Jingle Jabha, D. F.

Juan, P.-J.: see Lin, S.-Y.

Jun, C.-H.: see Butt, K. A.

K

Kalkan-Sevinc, Zehra S. and Ling, Michael T. K.: Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer, Jul., 1518

Kammoun, F.: see Ammous, D.

Kaneko, Masahito: see Kawabata, Tomoya

Kaneko, Masahito, Kawabata, Tomoya, and Aihara, Shuji: Effect of Impact Energy in ESSO Test (Part 2: Proposal of Validity Criteria of Impact Condition in ESSO Test by FEM Crack Propagation Analysis, Sep., 1782

Kang, Gi-Chun and Kim, Jiseong: Behavioral Characteristics of Group Batter Piles According to Pile Inclination and Action Direction under Statically Lateral Loads, Jul., 1591

Kang, Gi-Chun: see Kim, Jiseong

Kang, Jidong: see Muhammad, Waqas

Kantor, Paul B.: Bayesian Estimates and the Effectiveness of Metal Detection Devices, Jan., 365

Kar, S.: see Barat, Kaustav

Karahan, E. A.: see Karahan, M.

Karahan, M., Karahan, E. A., and Karahan, N.: Blast Performance of Demining Footwear: Numerical and Experimental Trials on Frangible Leg Model and Injury Modeling, Mar., 666

Karahan, N.: see Karahan, M.

Kariem, M. A., Ruan, D., Beynon, J. H., and Prabowo, D. A.: Mini Round-Robin Test on the Split Hopkinson Pressure Bar, Mar., 457

Kawabata, Tomoya: see Kaneko, Masahito

Kawabata, Tomoya, Kaneko, Masahito, and Aihara, Shuji: Effect of Impact Energy in the Esso Test—Part 1: Basic Experiments and Validation of FEM Analysis, Sep., 2203

Kawamura, A.: see Tomiyama, K.

Kayid, M. and Izadkhah, S.: Testing Behavior of the Mean Inactivity Time, Nov., 2649

Kedarisetty, Sampat, Saha, Gourab, Biligiri, Krishna Prapoorna, and Sousa, Jorge B.: Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation, Nov., 2511

Keshavanarayana, Gopalakrishna: *see* Swaminathan, Prashanth

Khalid, Saeed: see Khan, Tariq M. R.

Khan, M.: see Tariq, F.

Khan, Tariq M. R., Maqsood, Amna, Warraich, Saad A., and Khalid, Saeed: Postweld Heat Treatment Characterization of Mild Steel (E6013) Welded Areas Using Wavelet Transform of Ultrasonic Testing Signals, Sep., 2274

Khiavi, A. K., Bakhshi, B., and Hojjat, V.: Evaluating the Rutting Performance of Geosynthetic Reinforced Pavement Containing Rubberized Asphalt Mixtures, Mar., 610

Khoo, M. B. C.: see Yeong, W. C.

Kim, Chae-Min: see Jeon, Byeong-Han

Kim, Jiseong: see Kang, Gi-Chun

Kim, Jiseong and Kang, Gi-Chun: Ultimate Lateral Resistance of Quadrangle Array Piles Using the Strain Wedge Model on Soil Subgrade, Nov., 2339

Kim, Y. Richard: see Safavizadeh, S. A.

Kishore Babu, M.: see Rambabu, U.

Knapp, Charles W.: see Shashank, B. S.

Kolba, Tiffany N.: see Schemmel, John J.

Kong, Changqing: see Miao, Shengjun

Kore, S. D.: see Kumar, R.

Kotik, H. G. and Perez Ipiña, J. E.: 3D Quasi-Static Strengths and Elastic Constants of Glass Fiber Reinforced Polyester Composite Extracted From a Wind Turbine Blade, Jan., 55

Kubota, Harutaka: see Pramudita, Jonas A.

Kuczynski, Thomas: see Memari, Ali M.

Kumar, Harshit: see Gope, Prakash Chandra

Kumar, R. and Kore, S. D.: Electromagnetic Crimping in Tube-to-Cylinder Configuration: Influence of the Base Profiles on the Joint Quality, May, 1064

Kusam, Abhilash: see Tayebali, Akhtarhusein A

Kwok, Kawai: see Molla, Tesfaye Tadesse

L

Lü, Xilin, Ma, Quan, Mu, Linlong, and Fang, Hang: Model Test of the Long-Term Behavior of a Pile-Net Structure Subgrade for High-Speed Railways, Nov., 2311

Lalvani, J. Isaac JoshuaRamesh: see Lingesan, Subramani

Larsson, P. L.: see Saadati, M.

see Jelagin, D.

Lee, C.-H., Lee, J., Lee, J., Heo, J., and Noh, M. S.: Analytical Performance Test of Pancreas Cancer miRNA Chip, May, 865

Lee, C.-H.: see Yang, L.-R.

Lee, Chang Hoon and Hover, Kenneth C.: Relationship between Computed Rate Constants and the Variability in Maturity-Based Strength Predictions, Jul., 1715

Lee, Chuan: see Lin, Chin-Tsai

Lee, H.: see Butt, K. A.

Lee, H.-P., Awang, A. Z., Omar, W., and Tiong, P. L. Y.: Derivation of Complete Stress-Strain Curve for SSTT-Confined High-Strength Concrete in Compression, Jan., 168

Lee, J.: see Lee, C.-H.

Lee, Jung-San and Wang, Yi-Hua: DNT-Based Image Illumination Refinement System with Concurrent Copyright Embedding, Sep., 2151

Lee, Ming-Gin: see Lee, Ming-Ju

Lee, Ming-Ju, Lee, Ming-Gin, Su, Yu-Min, Huang, Yishuo, and Tung, Wen-Chih: The Study of UHPC Precast Concrete Containing Incinerator Fly Ash, Jan., 160

Lee, Seong-Hyeok, Vo, Hai V., and Park, Dae-Wook: Investigation of Asphalt Track Behavior Under Cyclic Loading: Full-Scale Testing and Numerical Simulation, May, 934

Lee, Seung Oh: see Lee, Taegeon

Lee, Taegeon, Lee, Seung Oh, Ryu, Dong-Woo, and Youn, Heejung: Wear Resistance of Four Rocks Using Rotary Abrasion Test in Dry and Wet Conditions, Nov., 2389

Lei, Dong, He, Jintao, Zhu, Feipeng, and Bai, Pengxiang: Experimental Study on Dynamic Strength Improvement Mechanism of Concrete Materials, Jan., 151

Li, B.: see Wang, Y.

Li, Benben: see Jiang, Jiafei

Li, Chang: see Zhang, Jiaming

Li, Faping: see Liu, Jiesheng

Li, Huiping: see Hou, Hongli

Li, Jixiang: see Liu, Huikai

Li, Jun: see Zhao, Li-Hui

Li, Junhong: see Tao, Junliang

Li, L.: see Liu, W.

see Wu, W.

Li, Limin, He, Zhaoyi, Liu, Weidong, Jiang, Jianqing, and Hu, Cheng: Modification Mechanism and Performance of Qingchuan Rock Asphalt–Modified Asphalt, Jul., 1610

Li, Mingliang, Xu, Bin, Cao, Dongwei, Fan, Yongjun, and Ping, Shujiang: Investigation and Modeling of Sound Absorption Properties of Thin Layer Wearing Course, Jan., 46

Li, Qi: see He, Kuanfang

Li, R., Dai, Y., Wang, P., Sun, C., Zhang, J., and Pei, J.: Evaluation of Nano-ZnO Dispersed State in Bitumen with Digital Imaging Processing Techniques, May, 974

Li, Ruiqing: see Su, Sichao

Li, Sheng, Yang, Fan, and Liu, Zhao-Hui: Optimization on Additives of SBS and CTR for Interlayer Asphalt in Rigid-Flexible Composite Pavement, Mar., 593

Li, Xiangdong, Miao, Yu, and Cheng, Ke: Soil Arching Effect Analysis via a Modified Finite Element Model Based on a Field Test, Sep., 2218

Li, Xiaoqian: see Su, Sichao

Li, Y.: see Wu, M.

see Xia, X.

Li, Yanlong: see Chen, Xuguang

Li, Yao, Yang, Yunming, Yu, Hai-Sui, and Roberts, Gethin: Effect of Sample Reconstitution Methods on the Behaviors of Granular Materials under Shearing, Nov., 2718

Li, Yong: see Wang, Xiao

see Wu, Meixian

Li, Z.: see Du, Y.

Lian, P. Y.: see Jiang, X. L.

Liang, Mingchun: see Miao, Shengjun

Liao, M.-C., Lin, Y.-Y., and Tseng, M.-Y.: Laboratory Evaluation of Aging on Engineering Properties of Fine-Graded Porous-Asphalt Concrete, Jan., 215

Liao, Mou-Yuan and Ling, Hsiao-Chi: Effective Control Chart for Monitoring the Capability Stability of Non-Normal Processes Having S-Type Quality, May, 1196

Lim, A. X. J.: see Yeong, W. C.

Lim, S. L.: see Yeong, W. C.

Lin, C.-T. and Chang, T.-T.: Who Is My Successor? Creating a Mentor-Protégé Selection and Evaluation Model Based on the Views of Mentors, May, 1158

Lin, Chin-Tsai, Lee, Chuan, Wang, Sih-Wun, and Chen, Yi-Hsueh: Using the DE-MATEL Method to Explore the Critical Factors That Influence Visitors to Purchase Museum Cultural Products, Sep., 2045

Lin, S.-Y., Juan, P.-J., and Hsu, T.-Y.: An Evaluation of Vacation Lifestyle Scale—Using International and Theme Resort Hotels in Taiwan as Examples, Jan., 331

Lin, Y .- Y .: see Liao, M.-C.

Lin, Yun-Tsan, Chang, Tsang-Chuan, and Chen, Kuen-Suan: A Novel Approach to Evaluating the Performance of Physical Fitness by Combining Statistical Inference with the Radar Chart, Jul., 1498

Ling, Hsiao-Chi: see Liao, Mou-Yuan

Ling, Michael T. K.: see Kalkan-Sevinc, Zehra S.

Lingesan, Subramani, Annamalai, K., Parthasarathy, M., Ramalingam, Krishna Moorthy, Dhinesh, B., and Lalvani, J. Isaac JoshuaRamesh: Production of *Garcinia gummi-gutta* Methyl Ester (GGME) as a Potential Alternative Feedstock for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics, Nov., 2661

Liu, B.: see Yuan, Y.

Liu, Chaochao: see Lv, Songtao

Liu, Fu-Min, Wang, An-Lin, and Fu, Zhen-Sheng: Evaluation for VOF Simulation of Flow Field in Asphalt Foaming Chamber Based on Volume Fraction, Jul., 1391

Liu, Haipeng: see Jiang, Yingjun

Liu, Haiping, Ding, Lin, Yang, Yang, Guo, Meng, and Wang, Yiqi: Evolution of the Temperature Field of the Subgrade in the Permafrost Regions of the Great Khingan Mountains, Nov., 2319

Liu, Huikai, Lu, Haijun, Zhang, Xiong, Li, Jixiang, and Wang, Weiwei: An Experimental Study on Cement-Solidified Cd-Contaminated Soils under Drying-Wetting Cycles, Mar., 493

Liu, Jenny: see Zhao, Sheng

Liu, Jiesheng, Li, Faping, He, Xiang, Liu, Xiaofan, and Zhang, Rongtang: Experimental Study in the Modification of Mortar Samples with Incorporated Rice Husk, May, 967

Liu, M. D. and Xiong, J. J.: Fatigue Crack Growth Testing and Evaluation for Aluminum Alloys at Temperatures of 25°C and -70°C, Jul., 1698

Liu, Shu: see Qin, Xiaochun

Liu, W., Gao, Y., and Li, L.: Micromechanical Simulation of Influence Factors of Indirect Tensile Test of Asphalt Mixture, Mar., 832

Liu, Weidong: see Li, Limin

Liu, X.: see Zhao, P.

Liu, X.-T.: see Wang, M.-L.

Liu, Xiaofan: see Liu, Jiesheng

Liu, Xintian: see Yang, Xiaobing

Liu, Yan, Shen, Junan, Shi, Pengcheng, Zhu, Hong, and Gao, Qiju: Nanosized Morphology and Mechanical Properties of Recovered Binders from Weathered Asphalt Mixtures, Nov., 2498

Liu, Z.: see Miao, Y.

Liu, Zhao-Hui: see Li, Sheng

Logesh, G. and Madhavan, Venkataramanan: Performance, Combustion and Emission Characteristics of CI Engine Fueled with Sweet Lime Peel Oil (Citrus Limetta), Sep., 1799

Lokanayaki, K. and Malathi, A.: Enhanced Artificial Bee Colony Algorithm for Liver Cancer Analysis, May, 851

Lou, J.: see Cui, X.

Love, K.: see Straw, C. M.

Lu, Haijun: see Liu, Huikai

Lu, Juan: see Zhang, Guoxue

Lu, L.: see Zhao, P.

Lu, Liangliang: see Zhu, Shuyun

Luo, Yong: see Yuan, Jie

Lute, Racheal D.: see Adams, Matthew P.

Lv, J.: see Gu, X.

Lv, Songtao, Wang, Xiaoyang, Liu, Chaochao, and Wang, Shuangshuang: Fatigue Damage Characteristics Considering the Difference of Tensile-Compression Modulus for Asphalt Mixture, Nov., 2470

Lyon, R. E.: see Guo, H.

M

Múčka, P.: Simulated Road Profiles According to ISO 8608 in Vibration Analysis, Jan., 405

Münis, Mehmet Mehdi: see Uzun, Mahir

Ma, Quan: see Lü, Xilin Ma, Tao: see Zhang, Deyu

Ma, Ting: see Jiao, Jingpin

Ma, Y.: see Yuan, Y.

Madhavan, Venkataramanan: see Logesh, G.

Mahendra, N. V. D.: see Rao, P. S.

Mahmoudi, E., Meshkat, R. S., and Entezari, M.: A New Class of Beta-Complementary Exponential Power Series Distributions, Sep., 2171

Mahrenholtz, P. and Eligehausen, R.: Definition and Quantification of Anchor Ductility and Implications on Seismic Design, Jan., 370

Malathi, A.: see Lokanayaki, K.

Malo, René: see Trujillo Pasquale, Basso

Mannan, Umme Amina, Faisal, Hasan M., Hasan, Md Mehedi, and Tarefder, Rafiqul A.: Evaluating the Effect of High RAP Content on Asphalt Mixtures and Binders Fatigue Behavior, Sep., 1749

Manoharan, S., Chai, G., Chowdhury, S., and Golding, A.: A Study of the Structural Performance of Flexible Pavements Using Traffic Speed Deflectometer, May, 1280

Mao, Jianghong, Xu, Fangyuan, Jin, Weiliang, Gao, Qian, Xu, Yidong, and Xu, Chen: An Optical Fiber Sensor Method for Simultaneously Monitoring Corrosion and Structural Strain Induced by Loading, Jul., 1443

Maqsood, Amna: see Khan, Tariq M. R.

Masmoudi, N.: see Ammous, D.

McQuerry, Meredith: Validation of a Clothing Heat Transfer Model in Nonisothermal Test Conditions, Jan., 1

Mehdi, Muhammad: see Hassan, Muhammad Aqib

Memari, Ali M., Kuczynski, Thomas, and Solnosky, Ryan L.: Review of Design, Construction, and Capabilities of an Air Bladder Load Test Facility (ABLTF) at BCERL for Structural Experimental Enclosure Studies, Jul., 1421

Meng, Q.: see Cheng, C.

Mensching, D. J., Jeong, M. M., and Myers McCarthy, L.: Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures, Jan., 127

Meshkat, R. S.: see Mahmoudi, E.

Meza, A., Ortiz, J. A., Peralta, L., and Sánchez, C.: Comparison Between Destructive and Nondestructive Tests in the Evaluation of Abrasion Resistance of Concrete, May, 906

Miao, Shengjun, Wang, Hui, Guo, Xuelian, Liang, Mingchun, and Kong, Changqing: Microcrack Growth Behavior and CWFS Criterion Parameters Optimization of Granite with PFC, Nov., 2412

Miao, Y., Zhong, M., and Liu, Z.: Locating Wood Defects Based on Vibration Modes, Mar., 534

Miao, Yu: see Li, Xiangdong

Miller, T. H.: see Walker, K.

Minto, James M.: see Shashank, B. S.

Miramontes, Alejandro: see Garcia, Victor M.

Mishra, Raja K.: see Muhammad, Waqas

Moffatt, Edward G.: see Adams, Matthew P.

Mohamadzadeh, Milad and Hindman, Daniel: Comparison of Mode II Fracture Toughness Test Methods for Wood and Wood-Based Composites, Sep., 1770

Molla, Tesfaye Tadesse, Greco, Fabio, Kwok, Kawai, Zielke, Philipp, and Frandsen, Henrik Lund: Development of High Temperature Mechanical Rig for Characterizing the Viscoplastic Properties of Alloys Used in Solid Oxide Cells, Sep., 1918

Mondal, Snehasish and Biligiri, Krishna Prapoorna: Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties, May, 892

Moradi, Ali and Soltani, Nasser: Response Surface Methodology for the Remaining Creep Life Estimation by the Small Punch Creep Test, Nov., 2549

Mountassir, Gráinne El: see Shashank, B. S.

Mu, Linlong: see Lü, Xilin

Muhammad, Waqas, Kang, Jidong, Mishra, Raja K., and Inal, Kaan: A Simple Approach to Performing Large Strain Cyclic Simple Shear Tests: Methodology and Experimental Results, Nov., 2604

Muhunthan, Balasingam: see Wu, Shenghua

Munirathnam, N. R.: see Rambabu, U.

Munshaw, G.: see Dickson, K.

Muyu, Liu: see Yunpeng, Liu

Myers McCarthy, L.: see Mensching, D. J.

N

Nadarajah, S., Bagheri, S. F., Alizadeh, M., and Samani, E. Bahrami: Estimation of the Stress Strength Parameter for the Generalized Exponential-Poisson Distribution, Sep., 2184

Nasir, Muhammad: see Hassan, Muhammad Aqib

Natarajan, E.: see Srimanickam, B.

Nazarian, Soheil: see Garcia, Victor M.

Neupane, Madan, Parsons, Robert L., Han, Jie, Parr, David A., and Jacobe, James A.: Evaluation of Soil Saver Walls on Aquatic Organism Passage Through Box Culverts, Jul., 1313

Ni, James C.: see Cheng, Wen-Chieh

Nie, Z.-H., Jiao, T., Wang, X., and Qiu, T.: Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements, Jan., 428

Nilmanee, Somporn, Jinkarn, Tunyarut, Jarupan, Lerpong, Pisuchpen, Supachai, and Yoxall, Alaster: Seal Strength Evaluation of Flexible Plastic Films by Machine Testing and Human Peeling, Jul., 1508

Niu, J. Y.: see Jiang, X. L.

Niu, Xiaodong: see Chen, Xuguang

Noh, M. S.: see Lee, C.-H.

0

Ochoa-Ruiz, Gilberto: *see* Angeles-Herrera, D.

Omar, W.: see Lee, H.-P.

Ortiz, J. A.: see Meza, A.

Otadi, Ameneh and Tanzadeh, Javad: Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers, Jul., 1321

Owais, Muhammad: see Hassan, Muhammad Aqib

Ozcelik, Yilmaz: see Sharghi, Mohammad

P

Packer, Jeffrey A.: see Yankelevsky, David Z.

Padade, A. H.: see Golait, Y. S.

Paiva, O. A.: see Cordeiro, G. C.

Pang, Qiling: see Yin, Jian

Park, Dae-Wook: see Lee, Seong-Hyeok

Parr, David A.: see Neupane, Madan

Parsons, Robert L.: see Neupane, Madan

Parthasarathy, M.: see Lingesan, Subramani

Parvathi, C., Shoba, U. S., Prakash, C., and Sivamani, S.: Manihot esculenta Peel Powder: Effective Adsorbent for Removal of Various Textile Dyes from Aqueous Solutions, Nov., 2299

Paulter, Nicholas G.: see Glover, Jack L.

Paulter, Nicholas G. Jr.: see Gupta, Praful

Pešek, L.: see Ambriško, L.

Pearn, W. L., Tai, Y. T., and Chiu, Y. T.: Production Yield for Multiple Line Processes: Product Acceptance Determination, Jan., 340

Pei, J.: see Li, R.

Pei, Zhichao, Rong, Weibin, Wang, Lefeng, Wang, Shupeng, and Sun, Lining: A Design of an Instrument Based on a Piezoelectric Actuator to Study the Force Output of Piezoelectric Ceramic, Sep., 1852

Peng, Erxing, Zhang, Dingwen, Sun, Wenbo, and Du, Guangyin: Desaturation for Liquefaction Mitigation Using Biogas Produced by *Pseudomonas stutzeri*, Jul., 1333

Peng, Zhigang, Huo, Jinhua, Ye, Zhongbin, Zhang, Rui, and Feng, Qian: Investigation of the Synthesized Retarder on Cement Slurry Hydration Based on Low Field NMR, Nov., 2431

Peralta, L.: see Meza, A.

Perez Ipiña, J. E.: see Kotik, H. G.

Pham, Van Kien, Hoang, Anh Tho Truong, and Thanh, Ha Le Thi: Evaluating the Best Outsourcing Service Country in the Southeast Asian Region: A Fuzzy-AHP Approach, Sep., 2227

Pillai, Radhakrishna G.: see Rajagopal, Ranjitha

Ping, Shujiang: see Li, Mingliang

Pisuchpen, Supachai: see Nilmanee, Somporn

Pourgharibshahi, Morteza: see Rasay,

Prabhu, T. R.: Correlation of Deformation Strain with the Tensile Properties and Fracture Mode of the AA 2014 Alloy Using Simulations and Experiments, May, 999

Prabowo, D. A.: see Kariem, M. A.

Pradeep, R.: see Ramakrishnan, C.

Prakash, C.: see Jebastin Rajwin, A.

see Parvathi, C.

Pramudita, Jonas A., Kubota, Harutaka, Tanabe, Yuji, Ito, Masato, and Watanabe, Ryoji: Development of an Equibiaxial Tensile Test Device and Associated Test Method for Parameter Identification of Hyperelastic Ogden Model of Soft Material, Jan., 77

Premalatha, P. V.: see Senthil Kumar, K.

Purohit, Himanshu: see Gope, Prakash Chandra

Q

Qi, J.: see Cheng, C.

Qin, Xiaochun, Cui, Shengnan, and Liu, Shu: Linking Ecology and Service Function

in Scenic Road Landscape Planning: A Spatial Analysis Approach, Jul., 1297

Qin, Yuan: see Feng, Shangxin

Qiu, M.: see Xia, X.

Qiu, T.: see Nie, Z.-H.

see Tavassoti-Kheiry, P.

R

Rahaman, Mohammed Ziaur, Hossain, Zahid, and Zaman, Musharraf: Nonrecoverable Compliance and Recovery Behavior of Polymer-Modified and Reclaimed Asphalt Pavement (RAP)–Modified Binders in Arkansas, Nov., 2483

Rajagopal, Ranjitha, Sharma, Sameer, Pillai, Radhakrishna G., and Subramanian, Sankara J.: Assessment of Stress-Strain Behavior of Corroded Steel Reinforcement Using Digital Image Correlation (DIC), Sep., 1874

Ramakrishna, V.: see Rao, P. S.

Ramakrishnan, C. and Pradeep, R.: Voltage Sensorless Controller for Photovoltaic Integrated Shunt Active Power Filter for Enhancement of Power Quality, Jan., 252

Ramalingam, Krishna Moorthy: see Lingesan, Subramani

Ramasamy, M.: see Velumani, R.

Rambabu, U., Balaram, V., Ratheesh, R., Chatterjee, S., Kishore Babu, M., and Munirathnam, N. R.: Assessment of Hazardous Substances in Electrical Cables: Implementation of RoHS Regulations in India, Sep., 1930

Ramezanianpour, Amir Mohammad: see Hatami, Behzad

Ran, M.: see Cui, X.

Ran, Mao-ping, Xiao, Shenqing, Zhou, Xing-lin, and Xiao, Wang-xin: Evaluation of Segregation in Asphalt Pavement Surface Using Concave Multifractal Distribution, Sep., 2100

Rao, P. S., Ramakrishna, V., and Mahendra, N. V. D.: Experimental and Analytical Modal Analysis of Cantilever Beam for Vibration Based Damage Identification Using Artificial Neural Network, Mar., 656

Rasay, Hasan, Pourgharibshahi, Morteza, and Fallahnezhad, Mohammad Saber: Sequential Sampling Plan in the Truncated Life Test for Weibull Distribution, Mar., 693

Ratheesh, R.: see Rambabu, U.

Ravi, S.: see Geetha, P.

Reis, Henrique: see Behnia, Behzad

Roberts, Gethin: see Li, Yao

Rong, Weibin: see Pei, Zhichao

Ruan, D.: see Kariem, M. A.

Rufuss, D. Dsilva Winfred, Iniyan, S., and Suganthi, L.: Combined Effect of Heat Storage, Reflective Material, and Additional Heat Source on the Productivity of a Solar Still—Techno-Economic Approach, Nov., 2692

Ruiz, E.: see Demian, C.

Ryu, Dong-Woo: see Lee, Taegeon

S

Sánchez, C.: see Meza, A.

Saadati, M., Forquin, P., Weddfelt, K., Larsson, P. L., and Hild, F.: On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects, Jan., 33

Saadati, M.: see Jelagin, D.

Saedi Daryan, Amir: see Hatami, Behzad

Safavizadeh, S. A., Wargo, A., and Kim, Y. Richard: Utilizing Digital Image Correlation (DIC) in Asphalt Pavement Testing, May, 984

Safronava, N.: see Guo, H.

Saha, Gourab: see Kedarisetty, Sampat

Salguero, Michael P.: see Schemmel, John J.

Samadian, Kaveh: see Habibalahi, Abbas

Samani, E. Bahrami: see Nadarajah, S.

Sang, Y.: see Zhang, D.

Sankaran Pillai, G.: see Senthil Kumar, K.

Saxena, Rajiv K.: see Tripathy, S. Swarupa

Sayuti, Ab Karim Mohd: see Aqilah, Derahman Nur

Schemmel, John J., Kolba, Tiffany N., Salguero, Michael P., and West, Matthew: Sampling Concrete from a Revolving Drum Truck Mixer, Nov., 2459

Schumacher, T.: see Walker, K.

Schuurmans, J.: Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester, May, 1290

Seica, Michael: see Yankelevsky, David Z.

Seif, Asghar: Multi-Objective Genetic Algorithm for Economic Statistical Design of the T^2 Control Chart with Variable Sample Size: The Updated Markov Chain Approach, May, 1209

Selvi, K.: see Jingle Jabha, D. F.

Sener, Bora and Yurci, Mehmet Emin: The Effects of Anisotropic Yield Functions on

Plastic Behavior of 304 Stainless Steel, Nov., 2584

Senthil Kumar, K., Premalatha, P. V., Baskar, K., Sankaran Pillai, G., and Shahul Hameed, P.: Assessment of Radioactivity in Concrete Made with e-Waste Plastic, Mar., 574

Shaban, Alaa M. and Cosentino, Paul J.: Preliminary Investigation of Predicting Permanent Deformations of Unbound Granular Materials Using Miniaturized Pressuremeter Cyclic Data, Sep., 1942

Shabestari, Saeed: see Shakouri, Mehdi

Shahul Hameed, P.: see Senthil Kumar, K.

Shaia, H. A.: see Abuel-Naga, H. M.

Shakouri, Mehdi, Esmailian, Mohammad, and Shabestari, Saeed: Effect of Silver Addition on Mechanical Properties and Stress Corrosion Cracking in a Predeformed and Overaged 7055 Aluminum Alloy, Sep., 1891

Shannon, Jay: see Sullivan, W. Griffin

Sharghi, Mohammad, Chakeri, Hamid, Afshin, Hassan, and Ozcelik, Yilmaz: An Experimental Study of the Performance of Two-Component Backfilling Grout Used behind the Segmental Lining of a Tunnel-Boring Machine, Sep., 2083

Shariati, A.: see Walker, K.

Sharma, Sameer: see Rajagopal, Ranjitha

Shashank, B. S., Minto, James M., Singh, Devendra Narain, Mountassir, Gráinne El, and Knapp, Charles W.: Guidance for Investigating Calcite Precipitation by Urea Hydrolysis for Geomaterials, Jul., 1527

Shaukat, Anum, Farhan, Saima, Fahiem, Muhammad Abuzar, Tauseef, Huma, Tahir, Fahima, and Usman, Ghousia: Textural and Geometrical Features Based Approach for Identification of Individuals Using Palmprint and Hand Shape Images from Multiple Multimodal Datasets, Nov., 2281

Shen, Dongya, Shi, Shuang, and Xu, Tao: Synthesis and Performance Evaluation of Epoxy Resin–Modified Shape Memory Polyurethane Sealant, Jul., 1452

Shen, Jack S.: see Cheng, Wen-Chieh

Shen, Junan: see Liu, Yan

Shen, Shihui: see Wu, Shenghua

Shetty, Rakshith and Singh, Devendra Narain: Rheological Characteristics of Fine-Grained Soil-Slurries, Nov., 2351

Shi, Pengcheng: see Liu, Yan

Shi, Shuang: see Shen, Dongya

Shi, W. and Jiang, J.: Principal Component Analysis Based on Marginal Density Ratios, May, 1168 **Shi, Weiya:** Iterative Kernel Principal Component for Large-Scale Data Set, Sep., 2130

Shieh, J.-I. and Wu, H.-H.: A Framework of Applying Ordering Coefficient Based on the Information Energy to Identify the Causal Relationships among Critical Factors from Raw Data, Mar., 704

Shoba, U. S.: see Parvathi, C.

Shuguang, Hu: see Yunpeng, Liu

Siddiqui, M. Z.: see Tariq, F.

Singaravel, G.: see Eswaramoorthi, R.

Singh, B.: see Waseem, S. A.

Singh, Devendra Narain: see Shashank, B. S.

see Shetty, Rakshith

Singh, Nahar: see Tripathy, S. Swarupa

Singh, Surya Pratap and Biligiri, Krishna Prapoorna: Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique, Nov., 2440

Sivamani, S.: see Parvathi, C.

Sivaprasad, S.: see Barat, Kaustav

Solaimanian, M.: see Tavassoti-Kheiry, P.

Solnosky, Ryan L.: see Memari, Ali M.

Soltani, Nasser: see Moradi, Ali

Song, Weimin: see Yin, Jian

Song, Yao: see Yue, Zhongwen

Sorensen, Andrew D.: see Thomas, Robert J.

Sorochan, J.: see Dickson, K.

Sousa, Jorge B.: see Kedarisetty, Sampat

Spiller, Kevin: see Yankelevsky, David Z.

Srimanickam, B., Vijayalakshmi, M. M., and Natarajan, E.: Energy and Exergy Efficiency of Flat Plate PVT Collector With Forced Convection, Mar., 783

Srinivasan, M.: see Balasubramaniam, P. M.

Srinivasaraju, P.: see Chirala, H. K.

Srinivasarao, G.: see Chirala, H. K.

Stephenson, W. Robert: see Buss, Ashley

Straw, C. M., Henry, G. M., Love, K., Carrow, R. N., and Cline, V.: Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties, Mar., 714

Su, Sichao, Li, Xiaoqian, Li, Ruiqing, and Zhang, Wu: Determination of the Cavitation Range of Power Ultrasound in an Aluminum Alloy Melt, Nov., 2616

Su, Yu-Min: see Lee, Ming-Ju

Subedi, Subodh: see Zahui, Marcellin

Subramanian, Sankara J.: see Rajagopal, Ranjitha

Suganthi, L.: see Rufuss, D. Dsilva Winfred

Sui, Y.: see Cheng, C.

Suleiman, Dambatta Yusuf: see Aqilah, Derahman Nur

Sullivan, W. Griffin, Howard, Isaac L., Cost, Tim, and Shannon, Jay: Early Age Thermal Measurements of Soil-Cement Mixtures for Quality Control during Paving, Sep., 1957

Sun, C.: see Li, R.

Sun, G. C.: see Jiang, X. L.

Sun, Lining: see Pei, Zhichao

Sun, Wenbo: see Peng, Erxing

Sun, Z.: see Cheng, C.

Swaminathan, Prashanth and Keshavanarayana, Gopalakrishna: Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System, Sep., 1911

Swati: see Tripathy, S. Swarupa

T

Tahir, Fahima, Fahiem, Muhammad Abuzar, Farhan, Saima, and Tauseef, Huma: Nondestructive Evaluation of Solid Pharmaceutical Products Using Wavelet Transformations and Multispectral Data, Jul., 1399

Tahir, Fahima: see Shaukat, Anum

Tai, Y. T.: see Pearn, W. L.

Tamilselvan, K. and Anita, R.: Performance Evaluation of PV-Supported STAT-COM for Voltage and Frequency Regulation of Standalone SEIG System, Jan., 266

Tan, Yiqiu: see Xue, Hengxiao

Tanabe, Yuji: see Pramudita, Jonas A.

Tang, Can: see Zheng, Wenzhong

Tanzadeh, Javad: see Otadi, Ameneh

Tao, Junliang, Li, Junhong, Wang, Xiangrong, and Bao, Ruotian: Nature-Inspired Bridge Scour Countermeasures: Streamlining and Biocementation, Jul., 1376

Tarafder, S.: see Barat, Kaustav

Tarefder, Rafiqul A.: see Mannan, Umme Amina

Tariq, F., Khan, M., Farhan, M., and Siddiqui, M. Z.: Strength of Aluminum Alloys Under Static Mixed-Mode I/II Loading Conditions, Jan., 294

Tauseef, H.: see Usman, G.

Tauseef, Huma: see Shaukat, Anum

see Tahir, Fahima

Tavares, L. M.: see Cordeiro, G. C.

Tavassoti-Kheiry, P., Boz, I., Solaimanian, M., and Qiu, T.: Evaluation of Nondestructiveness of Resonant Column Testing for Characterization of Asphalt Concrete Properties, Mar., 631

Tayebali, Akhtarhusein A., Kusam, Abhilash, and Bacchi, Christopher: An Innovative Method for Interpretation of Asphalt Boil Test, Jul., 1622

Terán, G.: see Angeles-Herrera, D.

Thanh, Ha Le Thi: see Pham, Van Kien

Thomas, Robert J. and Sorensen, Andrew D.: Charpy Impact Test Methods for Cementitious Composites: Review and Commentary, Nov., 2422

Thoms, A.: see Dickson, K.

Tian, Xichun: see Xu, Wenbin

Tiong, P. L. Y.: see Lee, H.-P.

Tiznobaik, M. and Bassuoni, M. T.: A Test Protocol for Evaluating Absorption of Joints in Concrete Pavements, Jul., 1636

Toledo Filho, R. D.: see Cordeiro, G. C.

Tomiyama, K. and Kawamura, A.: Physiological Information for Pavement Ride Quality Verification, Jan., 227

Tong, Jiachi: see Yang, Xiaobing

Tosh, Ronald E.: see Glover, Jack L.

Tripathy, S. Swarupa, Swati, Saxena, Rajiv K., and Singh, Nahar: Determination of Trace Elements in High Purity Silver Granules Using Sector Field Inductively Coupled Plasma Mass Spectrometry, Jul., 1489

Trujillo Pasquale, Basso, Malo, René, and Jolin, Marc: Alternative Setup Apparatus to Test ASTM A944-10 Beam-End Specimens, Jul., 1741

Tseng, M.-Y.: see Liao, M.-C.

Tung, Wen-Chih: see Lee, Ming-Ju

U

Uludağ, M.: see Yazman, Ş.

Uludağ, Muhammet, Yazman, Şakir, Gemi, Lokman, Bakircioğlu, Barış, Erzi, Eray, and Dispinar, Derya: Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy, Nov., 2592

Usman, G., Fahiem, M. A., Farhan, S., and Tauseef, H.: Evaluating Various Lung Cancer Nodule Detection Techniques—A Comparative Study, Mar., 798

Usman, Ghousia: see Shaukat, Anum

Uyaner, M.: see Yazman, Ş.

Uzun, Mahir, Münis, Mehmet Mehdi, and Düzcükoğlu, Hayrettin: Pitting Formation

in Concave-Convex Gears Manufactured from AISI 8620 Steel, Jul., 1708

V

Velumani, R., Vijayakumar, M., and Ramasamy, M.: Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System, Mar., 469

Vijayakumar, M.: see Velumani, R.

Vijayalakshmi, M. M.: see Srimanickam, B.

Vinod, A. V.: see Anil Kumar Naik, B.

Vo, Hai V.: see Lee, Seong-Hyeok

W

Walker, K., Miller, T. H., Gupta, R., Shariati, A., and Schumacher, T.: Development of Virtual Visual Sensor Applications for Wood Structural Health Monitoring, Jan., 24

Wan, Changbing: see Xu, Wenbin

Wang, An-Lin: see Liu, Fu-Min

Wang, F. F.: see Jiang, X. L.

Wang, F.-K.: see Butt, K. A.

Wang, H., Xu, G., Wang, Z., and Bennert, T.: Flexible Pavement Interface Bonding: Theoretical Analysis and Shear-Strength Measurement, Jan., 99

Wang, Hainian: see Chen, Xi

Wang, Hao: see Chen, Jun

Wang, Hui: see Miao, Shengjun

Wang, J.-F.: see Wu, X.

Wang, Jianchen: see Zhang, Xu

Wang, Kuo-Hsiung, Yen, Tseng-Chang, and Chen, Jia-Yu: Optimization Analysis of Retrial Machine Repair Problem with Server Breakdown and Threshold Recovery Policy, Nov., 2630

Wang, Lefeng: see Pei, Zhichao

Wang, M.-L., Liu, X.-T., Wang, X.-L., and Wang, Y.-S.: Research on Load-Spectrum Construction of Automobile Key Parts Based on Monte Carlo Sampling, May, 1099

Wang, Mao-Chang: Relationship among Market Value Added, Cash Value Added, and Corporate Governance: A Case of Taiwan during 2011–2012, Nov., 2641

Wang, P.: see Li, R.

see Zhao, P.

Wang, Peng: see Wei, Biao

Wang, Qinghua: see Chen, Xi

Wang, Shuangshuang: see Lv, Songtao

Wang, Shupeng: see Pei, Zhichao

Wang, Sih-Wun: see Lin, Chin-Tsai

Wang, T. and Xu, T.: Photocatalytic Activity of N-Doped TiO₂ to Vehicle Exhaust in Road Tunnel, May, 1076

Wang, Weiwei: see Liu, Huikai

Wang, X.: see Du, Y.

see Nie, Z.-H.

Wang, X.-L.: see Wang, M.-L.

Wang, Xiangrong: see Tao, Junliang

Wang, Xiao, Wang, Xue, Hu, Lei, Du, Cheng-chao, and Li, Yong: Application of Nonlinear Ultrasonic Technique to Characterize the Damage Evolution in Structural Steel after Tensile Deformation, Jan., 385

Wang, Xiaojuan, Cai, Wenlu, and Chen, Zhenmao: NDT of Cavity Defect in Metallic Plate Using dc Potential Drop Method, Mar., 641

Wang, Xiaolan: see Yang, Xiaobing

Wang, Xiaoyang: see Lv, Songtao

Wang, Xue: see Wang, Xiao

Wang, Y.: Development and Application of the New Explosive Loading Experimental System of Digital Laser Dynamic Caustics, Mar., 680

Wang, Y., Yang, S., Gao, C., Li, B., and Ji, G.: Research on Nitrate Removal by Graphene Loaded With Iron Nanoparticles for Groundwater Remediation, Mar., 435

Wang, Y.-S.: see Wang, M.-L.

Wang, Yansong: see Yang, Xiaobing

Wang, Yi-Hua: see Lee, Jung-San

Wang, Yiqi: see Liu, Haiping

Wang, Z.: see Wang, H.

Wang, Zhi-Feng: see Cheng, Wen-Chieh

Wargo, A.: see Safavizadeh, S. A.

Warraich, Saad A.: see Khan, Tariq M. R.

Waseem, S. A. and Singh, B.: Shear Transfer in Normal- and High-Strength Recycled Aggregate Concrete, Jan., 178

Watanabe, Ryoji: see Pramudita, Jonas A.

Weddfelt, K.: see Saadati, M.

Wei, Biao, Wang, Peng, He, Xuhui, and Jiang, Lizhong: Seismic Isolation Characteristics of a Friction System, Jul., 1411

Wei, F.: see Cheng, C.

Wei, Xueye: see Zhang, Ou

West, Matthew: see Schemmel, John J.

Wu, Bin: see Jiao, Jingpin

Wu, H.-H.: see Shieh, J.-I.

Wu, Hao: see Yin, Jian

Wu, Jiantao: see Chen, Jun

Wu, M., Zhang, D., Chen, Z., and Li, Y.: A Strategy for Inspection of Cracks in a Thick Structure Using an ECT Probe, May, 1250

Wu, Meixian, Zhang, Dongli, Chen, Zhenmao, and Li, Yong: Improvement of Measuring Accuracy for Coating Covered on Conical Steel Shells by Correction of Eddy Current Signals, Jan., 17

Wu, S.: see Zhang, D.

Wu, Shenghua, Zhang, Weiguang, Shen, Shihui, and Muhunthan, Balasingam: Case Study: Evaluation of the Effect of Extraction Temperature on WMA Binder Containing Sasobit Additive, Sep., 2140

Wu, W., Li, L., Yu, J., Xu, S., Zhang, C., and Xue, L.: Investigation on Thermo-Oxidative Aging Properties of Asphalt Binder with Hindered Phenolic Antioxidant, Mar., 624

Wu, X. and Wang, J.-F.: Compressive Behavior of Cement Asphalt Mortar Under Low Confinement, Jan., 108

Wu, Yun: see Zhu, Shuyun

\mathbf{X}

Xia, X., Chang, Z., Li, Y., Ye, L., and Qiu, M.: Analysis and Prediction for Time Series on Torque Friction of Rolling Bearings, May, 1022

Xiao, Feipeng: see Yuan, Jie

Xiao, Pingcheng: see Jiang, Jiafei

Xiao, Shenqing: see Ran, Mao-ping

Xiao, Wang-xin: see Ran, Mao-ping

Xie, Luzhou: see Yue, Zhongwen

Xiong, Chunlong: see Yu, Jiangmiao

Xiong, J. J.: see Liu, M. D.

Xu, Bin: see Li, Mingliang

Xu, Chen: see Mao, Jianghong

Xu, Fangyuan: see Mao, Jianghong

Xu, G.: see Wang, H.

Xu, Guangji: see Chen, Jun

Xu, Peng: see Yang, Renshu

Xu, S.: see Wu, W.

Xu, Shixiang: see Zhang, Guoxue

Xu, Siyuan: see Yuan, Jie

Xu, T.: see Wang, T.

Xu, Tao: see Shen, Dongya

Xu, Wenbin, Tian, Xichun, and Wan, Changbing: Prediction of Mechanical Performance of Cemented Paste Backfill by the Electrical Resistivity Measurement, Nov., 2450

Xu, Yidong: see Mao, Jianghong

Xu, Zengguang: see Feng, Shangxin

Xue, Hengxiao, Cao, Liping, Hou, Xiangchen, and Tan, Yiqiu: Cohesive Property Evaluation of Crack Sealants Using a Low-Temperature Tensile Tester, Sep., 1983

Xue, Jinshun: see Jiang, Yingjun

Xue, L.: see Wu, W.

Y

Yan, Shuxin: see Zhang, Ou

Yang, Fan: see Li, Sheng

Yang, H.: see Jiang, X. L.

Yang, Hsueh-Cheng and Chang, Ching-Sheng: Kinematic Errors on a C-Type Gear with a Parabolic Surface, Nov., 2557

Yang, Jian-hong, Chen, Qi, Zhou, Jian-hua, and Fang, Huai-ying: Experimental Study on Impact Crushing of Granite Particles, Nov., 2376

Yang, L.-R., Chen, J.-H., and Lee, C.-H.: Exploring the Links between Task-Level Knowledge Management and Project Success, May, 1220

Yang, Liyun: see Yang, Renshu

Yang, Qing: see He, Kuanfang

Yang, Renshu, Ding, Chenxi, Yang, Liyun, Zhang, Yufei, and Xu, Peng: Behavior and Law of Crack Propagation in the Dynamic-Static Superimposed Stress Field, Nov., 2540

Yang, S.: see Wang, Y.

Yang, T.: see He, M.

Yang, W., Jiang, P., and Han, B.: Experimental Study on Mechanical Property of Honeycombed-Core Girderless Floor with Four Edges Simply Supported, Mar., 485

Yang, Xiaobing, Liu, Xintian, Tong, Jiachi, Wang, Yansong, and Wang, Xiaolan: Research on Load Spectrum Construction of Bench Test Based on Automotive Proving Ground, Jan., 244

Yang, Xu: see Chen, Xi

Yang, Yang: see Liu, Haiping

Yang, Yunming: see Li, Yao

Yankelevsky, David Z., Spiller, Kevin, Packer, Jeffrey A., and Seica, Michael: Standard Testing of Glass Revisited - Experimental and Theoretical Aspects, Sep., 1819

Yao, X.: see Yuan, Y.

Yazman, Ş., Gemi, L., Uludağ, M., Akdemir, A., Uyaner, M., and Dişpinar, D.: Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron, May, 1012

Yazman, Şakir: see Uludağ, Muhammet

Ye, L.: see Xia, X.

Ye, Zhongbin: see Peng, Zhigang

Yen, Tseng-Chang: see Wang, Kuo-Hsiung

Yeong, W. C., Lim, S. L., Khoo, M. B. C., Chuah, M. H., and Lim, A. X. J.: The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation, May, 1175

Yin, Jian, Pang, Qiling, Wu, Hao, and Song, Weimin: Using a Polymer-Based Sealant Material to Make Crack Repair of Asphalt Pavement, Sep., 2056

You, Zhanping: see Chen, Xi

Youn, Heejung: see Lee, Taegeon

Yoxall, Alaster: see Nilmanee, Somporn

Yu, B.: see Gu, X.

Yu, Hai-Sui: see Li, Yao

Yu, J.: see Wu, W.

Yu, Jiangmiao, Xiong, Chunlong, Zhang, Xiaoning, Ge, Zhesheng, and An, Guanfeng: Assessing Moisture Sensitivity of Rubberized Warm Mix Asphalt Mixtures Using the Surface Free Energy Method and Dynamic Water Pressure Tester, Mar., 580

Yu, Jia-Wei: see Zhao, Li-Hui

Yuan, Jie, Xu, Siyuan, Hou, Xiangdao, Xiao, Feipeng, Jiang, Changshan, and Luo, Yong: Functional Layer Designation of Combined Chip Seal and Slurry Seal in Airport Pavement, May, 956

Yuan, Y., Yao, X., Ma, Y., and Liu, B.: Impact Properties of Multi-Wall Carbon Nanotubes Modified Composites, May, 1261

Yue, Zhongwen, Zhang, Wang, Song, Yao, Hu, Qingwen, and Xie, Luzhou: Dynamic Fracture Characterization of Cantilever Structure Specimens with V-Notch Tips, Jul., 1434

Yunpeng, Liu, Fazhou, Wang, Shuguang, Hu, and Muyu, Liu: Bonding Durability of Two Repair Mortars with Low Modulus Cement and Asphalt Mortar (CA Mortar), Jan., 67

Yurci, Mehmet Emin: see Sener, Bora

 \mathbf{Z}

Zahui, Marcellin, Deshmukh, Satyam, and Subedi, Subodh: Variable Slip Ratio Rolling Contact Fatigue Tester, May, 1042 **Zaman, Musharraf**: see Rahaman, Mohammed Ziaur

Zanevska, Lyudmyla: see Zanevskyy, Ihor

Zanevskyy, Ihor and Zanevska, Lyudmyla: Approbation of the Ruffier Test Model Adapted for Children, May, 872

Zghal, Nadia Smaoui and Derbel, Nabil: MRI Images Segmentation and 3D Reconstruction for Cerebral Cancer Detection, Nov., 2707

Zhang, C.: see Wu, W.

Zhang, Chengping: see Zhang, Xu

Zhang, D., Chen, M., Wu, S., Zheng, J., and Sang, Y.: Low Temperature Properties of Waste Edible Vegetable Oil Rejuvenated Asphalt Binder with Recycled Tire Rubber, Mar., 602

Zhang, D.: see Wu, M.

Zhang, Deyu, Ma, Tao, Ding, Xunhao, Zhang, Weiguang, and Huang, Xiaoming: Effects of Internal Structure on Anisotropic Creep Behavior of Asphalt Mixture Based on User-Defined Three-Dimensional Discrete Element Method, Jul., 1355

Zhang, Dingwen: see Peng, Erxing

Zhang, Dongli: see Wu, Meixian

Zhang, Guoxue, Chen, Ziqing, Lu, Juan, Xu, Shixiang, and Zhou, Xiwu: Experimental Study on the Impact Properties of Concrete Bridge Pier Reinforced with Stainless Steel Rebar, Jul., 1650

Zhang, J.: see Cui, X.

see Li, R.

Zhang, Jiaming and Li, Chang: Experimental Study on Lime and Fly Ash–Stabilized Sintered Red Mud in Road Base, Jul., 1539

Zhang, Kang: see Chen, Bao

Zhang, Mingsheng: see Chen, Xuguang

Zhang, Ning: see Chen, Xuguang

Zhang, Ou, Wei, Xueye, and Yan, Shuxin: Numerical Analysis of Magnetic Flux Leakage of Transverse Defects of Sucker Rod, Sep., 2265

Zhang, Qian-qing: see Cui, Wei

Zhang, Rongtang: see Liu, Jiesheng

Zhang, Rui: see Peng, Zhigang

Zhang, Wang: see Yue, Zhongwen

Zhang, Weiguang: see Wu, Shenghua

see Zhang, Deyu

Zhang, Wu: see Su, Sichao

Zhang, X.: see Gu, X.

Zhang, Xiaoning: see Yu, Jiangmiao

see Liu, Huikai

Zhang, Xu, Zhang, Chengping, and Wang, Jianchen: Effect of Closely Spaced Twin Tunnel Construction beneath an Existing Subway Station: A Case Study, Jul., 1559

Zhang, Yufei: see Yang, Renshu

Zhao, Li-Hui, Yu, Jia-Wei, Chen, Tie, Li, Jun, and Zheng, Song-Lin: Development of Accelerated Durability Tests for Rear Suspension Components under Failure-Correlated Load, Sep., 1862

Zhao, P., Liu, X., Lu, L., and Wang, P.: Rietveld Quantitative Stability of Portland Blast Furnace Slag Cement Between Internal and External Standard Methods, Jan., 191

Zhao, Sheng and Liu, Jenny: Rutting Evaluation of Alaskan Asphalt Pavement Containing Sustainable Materials, Jul., 1366

Zheng, J.: see Zhang, D.

Zheng, Song-Lin: see Zhao, Li-Hui

Zheng, Wenzhong and Tang, Can: A New Multicoefficients Creep Model for Concrete, Jan., 199

Zheng, Xiao: see Cui, Wei

Zhong, M.: see Miao, Y.

Zhou, Jian-hua: see Yang, Jian-hong

Zhou, X.: see Cui, X.

Zhou, Xing-lin: see Ran, Mao-ping

Zhou, Xiwu: see Zhang, Guoxue

Zhu, Feipeng: see Lei, Dong

Zhu, Hong: see Liu, Yan

Zhu, Shuyun, Wu, Yun, and Lu, Liangliang: Fragmentation Evolution and Fractal Characteristics of Deep Rocks by Lab Compression-Shear Tests, Jul., 1548

Zielke, Philipp: see Molla, Tesfaye Tadesse

Zou, X.: see Gu, X.

Journal of Testing and Evaluation Subject Index to Volume 46 2018

NUMERICAL

304 stainless steel

The Effects of Anisotropic Yield Functions on Plastic Behavior of 304 Stainless Steel (Bora Sener and Mehmet Emin Yurci), Nov., 2584

3D reconstruction

Depth-from-Focus-Based 3D Reconstruction of Asphalt Pavement Micro-Texture (X. Cui, X. Zhou, J. Lou, J. Zhang, and M. Ran), Jan., 419

7055 aluminum alloy

Effect of Silver Addition on Mechanical Properties and Stress Corrosion Cracking in a Predeformed and Overaged 7055 Aluminum Alloy (Mehdi Shakouri, Mohammad Esmailian, and Saeed Shabestari), Sep., 1891

A

Abrasion strength

Comparison Between Destructive and Nondestructive Tests in the Evaluation of Abrasion Resistance of Concrete (A. Meza, J. A. Ortiz, L. Peralta, and C. Sánchez), May, 906

Absorption

A Test Protocol for Evaluating Absorption of Joints in Concrete Pavements (M. Tiznobaik and M. T. Bassuoni), Jul., 1636

Accelerated durability test

Development of Accelerated Durability Tests for Rear Suspension Components under Failure-Correlated Load (Li-Hui Zhao, Jia-Wei Yu, Tie Chen, Jun Li, and Song-Lin Zheng), Sep., 1862

Acceleration response

Dynamic Response of Shallow-Buried Tunnels under Asymmetrical Pressure Distributions (X. L. Jiang, F. F. Wang, H. Yang, P. Y. Lian, J. Chen, J. Y. Niu, and G. C. Sun), Jul., 1574

Acoustic emission

Nondestructive Acoustic Emission Test to Evaluate Thermal Damage in Asphalt Concrete Materials (Behzad Behnia, William G. Buttlar, and Henrique Reis), Jan., 118

Acoustic emission signal

Characteristic Analysis of Welding Crack Acoustic Emission Signals Using Synchrosqueezed Wavelet Transform (Kuanfang He, Qi Li, and Qing Yang), Nov., 2679

Activated carbon

Manihot esculenta Peel Powder: Effective Adsorbent for Removal of Various Textile Dyes from Aqueous Solutions (C. Parvathi, U. S. Shoba, C. Prakash, and S. Sivamani), Nov., 2299

Actual crushing ratio

Experimental Study on Impact Crushing of Granite Particles (Jian-hong Yang, Qi Chen, Jian-hua Zhou, and Huai-ying Fang), Nov., 2376

Additional stress

Evaluation of Bearing Capacity of Fly-Ash Highway Subgrade Based on Model Test (Wei Cui, Xiao Zheng, and Qian-qing Zhang), May, 943

Additive manufacturing

Effects of Process Parameters on the Surface Roughness of Stainless Steel 316L Parts Produced by Selective Laser Melting (Derahman Nur Aqilah, Ab Karim Mohd Sayuti, Yusof Farazila, Dambatta Yusuf Suleiman, Mohd Amran Nor Amirah, and Wan Badiuzaman Wan Nur Izzati), Jul., 1673

Adhesion

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Adjusted structural number (SNP)

A Study of the Structural Performance of Flexible Pavements Using Traffic Speed Deflectometer (S. Manoharan, G. Chai, S. Chowdhury, and A. Golding), May, 1280

Adsorbent

Manihot esculenta Peel Powder: Effective Adsorbent for Removal of Various Textile Dyes from Aqueous Solutions (C. Parvathi, U. S. Shoba, C. Prakash, and S. Sivamani), Nov., 2299

Age-smooth

On the Properties of the UBAC(2) Class of Life Distributions (N. S. A. Ali), Mar., 730

Aggregate

Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete (Matthew P. Adams, Racheal D. Lute, Edward G. Moffatt, and Jason H. Ideker), Jul., 1659

Aggregate loss

Laboratory Performance Evaluation of Reinforced Basalt Fiber in Sealing Asphalt Chips (X. Gu, X. Zhang, J. Lv, Z. Huang, B. Yu, and X. Zou), May, 1269

Aging

Laboratory Evaluation of Aging on Engineering Properties of Fine-Graded Porous-Asphalt Concrete (M.-C. Liao, Y.-Y. Lin, and M.-Y. Tseng), Jan., 215

Aging characteristics

Investigation on Thermo-Oxidative Aging Properties of Asphalt Binder with Hindered Phenolic Antioxidant (W. Wu, L. Li, J. Yu, S. Xu, C. Zhang, and L. Xue), Mar., 624

Aging time effects

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Air bladder

Review of Design, Construction, and Capabilities of an Air Bladder Load Test Facility (ABLTF) at BCERL for Structural Experimental Enclosure Studies (Ali M. Memari, Thomas Kuczynski, and Ryan L. Solnosky), Jul., 1421

Air permeability

A Study on the Effect of Plasma Treatment on Thermal Comfort Properties of Cotton Fabric (A. Jebastin Rajwin and C. Prakash), Sep., 1762

Air voids content

Investigation and Modeling of Sound Absorption Properties of Thin Layer Wearing Course (Mingliang Li, Bin Xu, Dongwei Cao, Yongjun Fan, and Shujiang Ping), Jan., 46

Air-blown asphalt

Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures (D. J. Mensching, M. M. Jeong, and L. Myers McCarthy), Jan., 127

AISI-8620

Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability Evaluation of AISI-8620 Case-Hardening Steel (Muhammad Aqib Hassan, Muhammad Mehdi, Muhammad Owais, Muhammad Nasir, and Syed Muhammad Kumail Haider), Jan., 305

Al alloys

Correlation of Deformation Strain with the Tensile Properties and Fracture Mode of the AA 2014 Alloy Using Simulations and Experiments (T. R. Prabhu), May, 999

Al-7Si

Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy (Muhammet Uludağ, Şakir Yazman, Lokman Gemi, Barış Bakircioğlu, Eray Erzi, and Derya Dispinar), Nov., 2592

Alaska

Rutting Evaluation of Alaskan Asphalt Pavement Containing Sustainable Materials (Sheng Zhao and Jenny Liu), Jul., 1366

Aluminum alloy

Fatigue Crack Growth Testing and Evaluation for Aluminum Alloys at Temperatures of 25°C and -70°C (M. D. Liu and J. J. Xiong), Jul., 1698

Strength of Aluminum Alloys Under Static Mixed-Mode I/II Loading Conditions (F. Tariq, M. Khan, M. Farhan, and M. Z. Siddiqui), Jan., 294

Aluminum content

Effect of Aluminum Content on Interfacial Reaction of Directionally Solidified TiAl Alloys (C. Cheng, Y. Sui, K. Feng, J. Qi, Y. He, Q. Meng, F. Wei, and Z. Sun), Mar., 764

Aluminum oxide

Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids (B. Anil Kumar Naik and A. V. Vinod), Mar., 445

Analytical modal analysis

Experimental and Analytical Modal Analysis of Cantilever Beam for Vibration Based Damage Identification Using Artificial Neural Network (P. S. Rao, V. Ramakrishna, and N. V. D. Mahendra), Mar., 656

Analytical network process

A Sustainability Strategy Assessment Framework Model for Medical Tourism Supply Chain in Asia (K.-C. Chung and L.-C. Chang), Mar., 745

Analytical performance

Analytical Performance Test of Pancreas Cancer miRNA Chip (C.-H. Lee, J. Lee, J. Lee, J. Heo, and M. S. Noh), May, 865

Analytical solution

Determination of the Thermal Conductivity Tensor of Thermally Orthotropic Materials with Transient Line Heat Source Method (Bao Chen, Yiyi Huang, Kang Zhang, and Yujun Cui), Sep., 2033

Anchor design

Definition and Quantification of Anchor Ductility and Implications on Seismic Design (P. Mahrenholtz and R. Eligehausen), Jan., 370

Anisotropic creep behavior

Effects of Internal Structure on Anisotropic Creep Behavior of Asphalt Mixture Based on User-Defined Three-Dimensional Discrete Element Method (Deyu Zhang, Tao Ma, Xunhao Ding, Weiguang Zhang, and Xiaoming Huang), Jul., 1355

Anisotropy

Modeling of Anisotropic Behavior of Aluminum Alloys to Investigate Ductile Fracture for the Improved Formability in the Upsetting Process (H. K. Chirala, M. J. Davidson, G. Srinivasarao, and P. Srinivasaraju), May, 1054

The Effects of Anisotropic Yield Functions on Plastic Behavior of 304 Stainless Steel (Bora Sener and Mehmet Emin Yurci), Nov., 2584

Annular gap

An Experimental Study of the Performance of Two-Component Backfilling Grout Used behind the Segmental Lining of a Tunnel-Boring Machine (Mohammad Sharghi, Hamid Chakeri, Hassan Afshin, and Yilmaz Ozcelik), Sep., 2083

ANSYS computer aided three-dimensional interactive application (CATIA)

Experimental and Analytical Modal Analysis of Cantilever Beam for Vibration Based Damage Identification Using Artificial Neural Network (P. S. Rao, V. Ramakrishna, and N. V. D. Mahendra), Mar., 656

Anti-personnel (AP) mine boot

Blast Performance of Demining Footwear: Numerical and Experimental Trials on Frangible Leg Model and Injury Modeling (M. Karahan, E. A. Karahan, and N. Karahan), Mar., 666

Applied control

Improvement of Energy Efficiency Using a Multi-Input Fuzzy Logic Controller in a Stone Cutting Machine (Said Mahmut Cinar, Hasan Cimen, and I. Sedat Buyuksagis), Nov., 2364

Aquatic organism passage

Evaluation of Soil Saver Walls on Aquatic Organism Passage Through Box Culverts (Madan Neupane, Robert L. Parsons, Jie Han, David A. Parr, and James A. Jacobe), Jul., 1313

Arcar

Strength of Aluminum Alloys Under Static Mixed-Mode I/II Loading Conditions (F. Tariq, M. Khan, M. Farhan, and M. Z. Siddiqui), Jan., 294

Arrest toughness

Effect of Impact Energy in the Esso Test—Part 1: Basic Experiments and Validation of FEM Analysis (Tomoya Kawabata, Masahito Kaneko, and Shuji Aihara), Sep., 2203 Behavior and Law of Crack Propagation in the Dynamic-Static Superimposed Stress Field (Renshu Yang, Chenxi Ding, Liyun

Yang, Yufei Zhang, and Peng Xu), Nov., 2540

Artificial intelligence

Decision Support System for Management Decision in High-Risk Business Environment (Ming-Fu Hsu and Chung-I Huang), Sep., 2240

Artificial neural network (ANN)

Experimental and Analytical Modal Analysis of Cantilever Beam for Vibration Based Damage Identification Using Artificial Neural Network (P. S. Rao, V. Ramakrishna, and N. V. D. Mahendra), Mar., 656

Asian region

Evaluating the Best Outsourcing Service Country in the Southeast Asian Region: A Fuzzy-AHP Approach (Van Kien Pham, Anh Tho Truong Hoang, and Ha Le Thi Thanh), Sep., 2227

Asphalt

Investigation on Thermo-Oxidative Aging Properties of Asphalt Binder with Hindered Phenolic Antioxidant (W. Wu, L. Li, J. Yu, S. Xu, C. Zhang, and L. Xue), Mar., 624 Low Temperature Properties of Waste Edible Vegetable Oil Rejuvenated Asphalt Binder with Recycled Tire Rubber (D. Zhang, M. Chen, S. Wu, J. Zheng, and Y. Sang), Mar., 602

Evaluation of Asphalt Effect on Water Quality Using Leaching Test and Molecular Simulation (Jun Chen, Hao Wang, Jiantao Wu, and Guangji Xu), Sep., 2121

Asphalt binder

Evaluating the Effect of High RAP Content on Asphalt Mixtures and Binders Fatigue Behavior (Umme Amina Mannan, Hasan M. Faisal, Md Mehedi Hasan, and Rafiqul A. Tarefder), Sep., 1749

Asphalt concrete

Assessing Crack Susceptibility of Asphalt Concrete Mixtures with Overlay Tester (Victor M. Garcia, Alejandro Miramontes, Jose Garibay, Imad Abdallah, and Soheil Nazarian), May, 924

Evaluation of Nondestructiveness of Resonant Column Testing for Characterization of Asphalt Concrete Properties (P. Tavassoti-Kheiry, I. Boz, M. Solaimanian, and T. Qiu), Mar., 631

Nondestructive Acoustic Emission Test to Evaluate Thermal Damage in Asphalt Concrete Materials (Behzad Behnia, William G. Buttlar, and Henrique Reis), Jan., 118 Relative Comparison of Complex Dynamic

Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures (D. J. Mensching, M. M. Jeong, and L. Myers McCarthy), Jan., 127

Asphalt emulsion

Functional Layer Designation of Combined Chip Seal and Slurry Seal in Airport Pavement (Jie Yuan, Siyuan Xu, Xiangdao Hou, Feipeng Xiao, Changshan Jiang, and Yong Luo), May, 956

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Asphalt foaming

Evaluation for VOF Simulation of Flow Field in Asphalt Foaming Chamber Based on Volume Fraction (Fu-Min Liu, An-Lin Wang, and Zhen-Sheng Fu), Jul., 1391

Asphalt mixture

Effects of Internal Structure on Anisotropic Creep Behavior of Asphalt Mixture Based on User-Defined Three-Dimensional Discrete Element Method (Deyu Zhang, Tao Ma, Xunhao Ding, Weiguang Zhang, and Xiaoming Huang), Jul., 1355

Evaluating the Effect of High RAP Content on Asphalt Mixtures and Binders Fatigue Behavior (Umme Amina Mannan, Hasan M. Faisal, Md Mehedi Hasan, and Rafiqul A. Tarefder), Sep., 1749

Fatigue Damage Characteristics Considering the Difference of Tensile-Compression Modulus for Asphalt Mixture (Songtao Lv, Xiaoyang Wang, Chaochao Liu, and Shuangshuang Wang), Nov., 2470

Micromechanical Simulation of Influence Factors of Indirect Tensile Test of Asphalt Mixture (W. Liu, Y. Gao, and L. Li), Mar., 832

Asphalt pavement

Depth-from-Focus-Based 3D Reconstruction of Asphalt Pavement Micro-Texture (X. Cui, X. Zhou, J. Lou, J. Zhang, and M. Ran), Jan., 419

Evaluation for VOF Simulation of Flow Field in Asphalt Foaming Chamber Based on Volume Fraction (Fu-Min Liu, An-Lin Wang, and Zhen-Sheng Fu), Jul., 1391

Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation (Sampat Kedarisetty, Gourab Saha, Krishna Prapoorna Biligiri, and Jorge B. Sousa), Nov., 2511

Utilizing Digital Image Correlation (DIC) in Asphalt Pavement Testing (S. A. Safavizadeh, A. Wargo, and Y. Richard Kim), May, 984

Asphalt rubber

Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures (D. J. Mensching, M. M. Jeong, and L. Myers McCarthy), Jan., 127

Asphalt track

Investigation of Asphalt Track Behavior Under Cyclic Loading: Full-Scale Testing and Numerical Simulation (Seong-Hyeok Lee, Hai V. Vo, and Dae-Wook Park), May, 934

ASTM

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

ASTM C617

Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties (Snehasish Mondal and Krishna Prapoorna Biligiri), May, 892

ASTM C1747

Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties (Snehasish Mondal and Krishna Prapoorna Biligiri), May, 892

ASTM F792

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

Asymmetric involute teeth

Kinematic Errors on a C-Type Gear with a Parabolic Surface (Hsueh-Cheng Yang and Ching-Sheng Chang), Nov., 2557

Asymmetrical pressure distributions

Dynamic Response of Shallow-Buried Tunnels under Asymmetrical Pressure Distributions (X. L. Jiang, F. F. Wang, H. Yang, P. Y. Lian, J. Chen, J. Y. Niu, and G. C. Sun), Jul., 1574

Asymptotic distribution

Estimation of the Stress Strength Parameter for the Generalized Exponential-Poisson Distribution (S. Nadarajah, S. F. Bagheri, M. Alizadeh, and E. Bahrami Samani), Sep., 2184

Asymptotic intervals

Interval Estimation of Quantile Difference in the Two-Parameter Exponential Distributions (Ayman Baklizi), Nov., 2654

Atomic Force Microscopy

Nanosized Morphology and Mechanical Properties of Recovered Binders from Weathered Asphalt Mixtures (Yan Liu, Junan Shen, Pengcheng Shi, Hong Zhu, and Qiju Gao), Nov., 2498

Austempered ductile irons

Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron (Ş. Yazman, L. Gemı, M. Uludağ, A. Akdemır, M. Uyaner, and D. Dişpinar), May, 1012

Auto regressive method

Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System (R. Velumani, M. Vijayakumar, and M. Ramasamy), Mar., 469

Autonomous water pumping system

Performance Evaluation of Standalone Photovoltaic System with Isolated Dual-Inductor dc-dc Converter for Water-Pumping Application (M. Mohammadha Hussaini and A. Josephine Amala), May, 1122

Autoregressive spectral extrapolation

A Pulse Compression Technique for Improving the Temporal Resolution of Ultrasonic Testing (Jingpin Jiao, Ting Ma, Song Hou, Bin Wu, and Cunfu He), May, 1238

В

B20 blend

Production of *Garcinia gummi-gutta* Methyl Ester (GGME) as a Potential Alternative Feedstock for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics (Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac JoshuaRamesh Lalvani), Nov., 2661

Ball roll distance

Comparison of Cultivation Methods Impact on Playability of *Agrostis stolonifera* Greens (K. Dickson, J. Sorochan, G. Munshaw, and A. Thoms), May, 1256

Basalt fiber asphalt-chip seal (BFACS)

Laboratory Performance Evaluation of Reinforced Basalt Fiber in Sealing Asphalt Chips (X. Gu, X. Zhang, J. Lv, Z. Huang, B. Yu, and X. Zou), May, 1269

Base oil

An Improved Method for Calculating Viscosity Index (VI) of Low Viscosity Base Oils (M. J. Covitch), Mar., 820

Batter pile

Behavioral Characteristics of Group Batter Piles According to Pile Inclination and Action Direction under Statically Lateral Loads (Gi-Chun Kang and Jiseong Kim), Jul., 1591

Bayes estimator

A New Application of Beta Gompertz Distribution in Reliability (M. KH. Hassan), Mar., 736

Estimation of the Stress Strength Parameter for the Generalized Exponential-Poisson Distribution (S. Nadarajah, S. F. Bagheri, M. Alizadeh, and E. Bahrami Samani), Sep., 2184

Bayes intervals

Interval Estimation of Quantile Difference in the Two-Parameter Exponential Distributions (Ayman Baklizi), Nov., 2654

Bayesian methods

Bayesian Estimates and the Effectiveness of Metal Detection Devices (Paul B. Kantor), Jan., 365

BE2 distribution

A New Mixed Poisson Distribution: Modeling and Applications (Mina Habibi and Akbar Asgharzadeh), Jul., 1728

Beam fatigue test

Evaluating the Effect of High RAP Content on Asphalt Mixtures and Binders Fatigue Behavior (Umme Amina Mannan, Hasan M. Faisal, Md Mehedi Hasan, and Rafiqul A. Tarefder), Sep., 1749

Beam-end

Alternative Setup Apparatus to Test ASTM A944-10 Beam-End Specimens (Basso Trujillo Pasquale, René Malo, and Marc Jolin), Jul., 1741

Bending-fatigue damage

Non-Destructive Evaluation of the Bending-Fatigue Damage in Carbon-Fiber-Composite Laminates Based on Ultrasonic Wave Propagation (M. He and T. Yang), Mar., 647

Beta exponential distribution

A New Class of Beta-Complementary Exponential Power Series Distributions (E. Mahmoudi, R. S. Meshkat, and M. Entezari), Sep., 2171

Beta Gompertz distribution

A New Application of Beta Gompertz Distribution in Reliability (M. KH. Hassan), Mar., 736

Bias

Accuracy of Heat-Release Rate Measured in Microscale Combustion Calorimetry (H. Guo, R. E. Lyon, and N. Safronava), May, 1090

Bidirectional

Effect of Sample Reconstitution Methods on the Behaviors of Granular Materials under Shearing (Yao Li, Yunming Yang, Hai-Sui Yu, and Gethin Roberts), Nov., 2718

Bimetallic rod

Electromagnetic Crimping in Tube-to-Cylinder Configuration: Influence of the Base Profiles on the Joint Quality (R. Kumar and S. D. Kore), May, 1064

Binder extraction and recovery

Case Study: Evaluation of the Effect of Extraction Temperature on WMA Binder Containing Sasobit Additive (Shenghua Wu, Weiguang Zhang, Shihui Shen, and Balasingam Muhunthan), Sep., 2140

Biodiese

Performance, Combustion and Emission Characteristics of CI Engine Fueled with Sweet Lime Peel Oil (Citrus Limetta) (G. Logesh and Venkataramanan Madhavan), Sep., 1799

Biogas

Desaturation for Liquefaction Mitigation Using Biogas Produced by *Pseudomonas*

stutzeri (Erxing Peng, Dingwen Zhang, Wenbo Sun, and Guangyin Du), Jul., 1333

Bio-inspired

Nature-Inspired Bridge Scour Countermeasures: Streamlining and Biocementation (Junliang Tao, Junhong Li, Xiangrong Wang, and Ruotian Bao), Jul., 1376

Biometrics

Textural and Geometrical Features Based Approach for Identification of Individuals Using Palmprint and Hand Shape Images from Multiple Multimodal Datasets (Anum Shaukat, Saima Farhan, Muhammad Abuzar Fahiem, Huma Tauseef, Fahima Tahir, and Ghousia Usman), Nov., 2281

Bio-oil

Optimization of Laboratory Preparation of the Emulsified Bioasphalt with Two Emulsifiers (Xi Chen, Hainian Wang, Qinghua Wang, Xu Yang, and Zhanping You), Jul., 1343

Blast loading

Review of Design, Construction, and Capabilities of an Air Bladder Load Test Facility (ABLTF) at BCERL for Structural Experimental Enclosure Studies (Ali M. Memari, Thomas Kuczynski, and Ryan L. Solnosky), Jul., 1421

Bleeding test

Modeling of Permeation and Fracturing Grouting in Sand: Laboratory Investigations (Wen-Chieh Cheng, James C. Ni, Jack S. Shen, and Zhi-Feng Wang), Sep., 2067

Boil test

An Innovative Method for Interpretation of Asphalt Boil Test (Akhtarhusein A. Tayebali, Abhilash Kusam, and Christopher Bacchi), Jul., 1622

Bomb squads

Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images (Jack L. Glover, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1462

Bond

Alternative Setup Apparatus to Test ASTM A944-10 Beam-End Specimens (Basso Trujillo Pasquale, René Malo, and Marc Jolin), Jul., 1741

Bond performance

Laboratory Performance Evaluation of Reinforced Basalt Fiber in Sealing Asphalt Chips (X. Gu, X. Zhang, J. Lv, Z. Huang, B. Yu, and X. Zou), May, 1269

Bond stability

Bonding Durability of Two Repair Mortars with Low Modulus Cement and Asphalt Mortar (CA Mortar) (Liu Yunpeng, Wang Fazhou, Hu Shuguang, and Liu Muyu), Jan., 67

Bond strength

Flexible Pavement Interface Bonding: Theoretical Analysis and Shear-Strength Measurement (H. Wang, G. Xu, Z. Wang, and T. Bennert), Jan., 99

Testing and Evaluation of Bond Surface Profile Influencing the CFRP Strengthening of Steel Members (A. Cyril Thomas and K. Baskar), Nov., 2569

Bootstrap

Effective Control Chart for Monitoring the Capability Stability of Non-Normal Processes Having S-Type Quality (Mou-Yuan Liao and Hsiao-Chi Ling), May, 1196 Interval Estimation of Quantile Difference in the Two-Parameter Exponential Distributions (Ayman Baklizi), Nov., 2654

Bootstrap confidence intervals

Estimation of the Stress Strength Parameter for the Generalized Exponential-Poisson Distribution (S. Nadarajah, S. F. Bagheri, M. Alizadeh, and E. Bahrami Samani), Sep., 2184

Bootstrap maximum entropy

Analysis and Prediction for Time Series on Torque Friction of Rolling Bearings (X. Xia, Z. Chang, Y. Li, L. Ye, and M. Qiu), May, 1022

Bootstrapping Monte Carlo simulation

A Framework of Applying Ordering Coefficient Based on the Information Energy to Identify the Causal Relationships among Critical Factors from Raw Data (J.-I. Shieh and H.-H. Wu), Mar., 704

Box culvert

Evaluation of Soil Saver Walls on Aquatic Organism Passage Through Box Culverts (Madan Neupane, Robert L. Parsons, Jie Han, David A. Parr, and James A. Jacobe), Jul., 1313

Brain computer interface

Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System (R. Velumani, M. Vijayakumar, and M. Ramasamy), Mar., 469

Bridge pier

Experimental Study on the Impact Properties of Concrete Bridge Pier Reinforced with Stainless Steel Rebar (Guoxue Zhang, Ziqing Chen, Juan Lu, Shixiang Xu, and Xiwu Zhou), Jul., 1650

Bridge scour

Nature-Inspired Bridge Scour Countermeasures: Streamlining and Biocementation (Junliang Tao, Junhong Li, Xiangrong Wang, and Ruotian Bao), Jul., 1376

Brilouin Optical Time Domain Analysis (BOTDA)

An Optical Fiber Sensor Method for Simultaneously Monitoring Corrosion and

Structural Strain Induced by Loading (Jianghong Mao, Fangyuan Xu, Weiliang Jin, Qian Gao, Yidong Xu, and Chen Xu), Jul., 1443

Brittle fracture

Effect of Impact Energy in the Esso Test—Part 1: Basic Experiments and Validation of FEM Analysis (Tomoya Kawabata, Masahito Kaneko, and Shuji Aihara), Sep., 2203

Brittle fracture test method

Effect of Impact Energy in ESSO Test (Part 2: Proposal of Validity Criteria of Impact Condition in ESSO Test by FEM Crack Propagation Analysis (Masahito Kaneko, Tomoya Kawabata, and Shuji Aihara), Sep., 1782

Building materials

Assessment of Radioactivity in Concrete Made with e-Waste Plastic (K. Senthil Kumar, P. V. Premalatha, K. Baskar, G. Sankaran Pillai, and P. Shahul Hameed), Mar., 574

Built-up edge

Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron (Ş. Yazman, L. Gemı, M. Uludağ, A. Akdemır, M. Uyaner, and D. Dişpinar), May, 1012

Bulk resistivity

Resistivity, Penetrability and Porosity of Concrete: A Tripartite Relationship (A. Bediwy and M. T. Bassuoni), Mar., 549

C

Calcite precipitation

Guidance for Investigating Calcite Precipitation by Urea Hydrolysis for Geomaterials (B. S. Shashank, James M. Minto, Devendra Narain Singh, Gráinne El Mountassir, and Charles W. Knapp), Jul., 1527

Calcium aluminate cement

Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete (Matthew P. Adams, Racheal D. Lute, Edward G. Moffatt, and Jason H. Ideker), Jul., 1659

California bearing ratio (CBR)

A Study of the Structural Performance of Flexible Pavements Using Traffic Speed Deflectometer (S. Manoharan, G. Chai, S. Chowdhury, and A. Golding), May, 1280

Cantilever beam

Experimental and Analytical Modal Analysis of Cantilever Beam for Vibration Based Damage Identification Using Artificial Neural Network (P. S. Rao, V. Ramakrishna, and N. V. D. Mahendra), Mar., 656

Cantilever structure

Dynamic Fracture Characterization of Cantilever Structure Specimens with V-Notch Tips (Zhongwen Yue, Wang Zhang, Yao Song, Qingwen Hu, and Luzhou Xie), Jul., 1434

Carbon fiber-reinforced polymer

Testing and Evaluation of Bond Surface Profile Influencing the CFRP Strengthening of Steel Members (A. Cyril Thomas and K. Baskar), Nov., 2569

Carbon nanotubes

Impact Properties of Multi-Wall Carbon Nanotubes Modified Composites (Y. Yuan, X. Yao, Y. Ma, and B. Liu), May, 1261

Carrier frequency offset (CFO)

Improved Artificial Bee Colony Optimization Approach in UWBOFDM for Frequency Offset Estimation (R. Eswaramoorthi and G. Singaravel), Jan., 317

Cash value added

Relationship among Market Value Added, Cash Value Added, and Corporate Governance: A Case of Taiwan during 2011– 2012 (Mao-Chang Wang), Nov., 2641

Cassava peel

Manihot esculenta Peel Powder: Effective Adsorbent for Removal of Various Textile Dyes from Aqueous Solutions (C. Parvathi, U. S. Shoba, C. Prakash, and S. Sivamani), Nov., 2299

Causal relationship

A Framework of Applying Ordering Coefficient Based on the Information Energy to Identify the Causal Relationships among Critical Factors from Raw Data (J.-I. Shieh and H.-H. Wu), Mar., 704

Caustics

Behavior and Law of Crack Propagation in the Dynamic-Static Superimposed Stress Field (Renshu Yang, Chenxi Ding, Liyun Yang, Yufei Zhang, and Peng Xu), Nov., 2540

Dynamic Fracture Characterization of Cantilever Structure Specimens with V-Notch Tips (Zhongwen Yue, Wang Zhang, Yao Song, Qingwen Hu, and Luzhou Xie), Jul., 1434

Cavitation

Creep Fatigue Interaction under Different Test Variables: Mechanics and Mechanisms (Kaustav Barat, S. Sivaprasad, S. Kar, and S. Tarafder), Nov., 2521

Cavitation range

Determination of the Cavitation Range of Power Ultrasound in an Aluminum Alloy Melt (Sichao Su, Xiaoqian Li, Ruiqing Li, and Wu Zhang), Nov., 2616

Cd-contaminated soil

An Experimental Study on Cement-Solidified Cd-Contaminated Soils under Drying-Wetting Cycles (Huikai Liu, Haijun Lu, Xiong Zhang, Jixiang Li, and Weiwei Wang), Mar., 493

Cement

Charpy Impact Test Methods for Cementitious Composites: Review and Commentary

(Robert J. Thomas and Andrew D. Sorensen), Nov., 2422

Rietveld Quantitative Stability of Portland Blast Furnace Slag Cement Between Internal and External Standard Methods (P. Zhao, X. Liu, L. Lu, and P. Wang), Jan., 191

Cement asphalt mortar

Compressive Behavior of Cement Asphalt Mortar Under Low Confinement (X. Wu and J.-F. Wang), Jan., 108

Cement and asphalt mortar

Bonding Durability of Two Repair Mortars with Low Modulus Cement and Asphalt Mortar (CA Mortar) (Liu Yunpeng, Wang Fazhou, Hu Shuguang, and Liu Muyu), Jan., 67

Cement paste backfill

Prediction of Mechanical Performance of Cemented Paste Backfill by the Electrical Resistivity Measurement (Wenbin Xu, Xichun Tian, and Changbing Wan), Nov., 2450

Cementitious composites

Charpy Impact Test Methods for Cementitious Composites: Review and Commentary (Robert J. Thomas and Andrew D. Sorensen), Nov., 2422

Cementitious stabilized soil

Early Age Thermal Measurements of Soil-Cement Mixtures for Quality Control during Paving (W. Griffin Sullivan, Isaac L. Howard, Tim Cost, and Jay Shannon), Sep., 1957

Cement-stabilized recycled pavement materials

Fatigue Performance of Vertical Vibration Compacted Cement-Stabilized Recycled Pavement Materials (Yingjun Jiang, Haipeng Liu, and Jinshun Xue), Sep., 2251

Cerebral magnetic resonance imaging

MRI Images Segmentation and 3D Reconstruction for Cerebral Cancer Detection (Nadia Smaoui Zghal and Nabil Derbel), Nov., 2707

Chaos characteristics

Analysis and Prediction for Time Series on Torque Friction of Rolling Bearings (X. Xia, Z. Chang, Y. Li, L. Ye, and M. Qiu), May, 1022

Characterization

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Charpy

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Charpy impact test

Charpy Impact Test Methods for Cementitious Composites: Review and Commentary (Robert J. Thomas and Andrew D. Sorensen), Nov., 2422

Chemical compositions

Investigation on Thermo-Oxidative Aging Properties of Asphalt Binder with Hindered Phenolic Antioxidant (W. Wu, L. Li, J. Yu, S. Xu, C. Zhang, and L. Xue), Mar., 624

Chemical structure

Investigation on Thermo-Oxidative Aging Properties of Asphalt Binder with Hindered Phenolic Antioxidant (W. Wu, L. Li, J. Yu, S. Xu, C. Zhang, and L. Xue), Mar., 624

Chip morphology

Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron (Ş. Yazman, L. Gemi, M. Uludağ, A. Akdemir, M. Uyaner, and D. Dişpinar), May, 1012

Clamping force

Shear Transfer in Normal- and High-Strength Recycled Aggregate Concrete (S. A. Waseem and B. Singh), Jan., 178

Classification

Nondestructive Evaluation of Solid Pharmaceutical Products Using Wavelet Transformations and Multispectral Data (Fahima Tahir, Muhammad Abuzar Fahiem, Saima Farhan, and Huma Tauseef), Jul., 1399 Principal Component Analysis Based on Marginal Density Ratios (W. Shi and J. Jiang), May, 1168

Textural and Geometrical Features Based Approach for Identification of Individuals Using Palmprint and Hand Shape Images from Multiple Multimodal Datasets (Anum Shaukat, Saima Farhan, Muhammad Abuzar Fahiem, Huma Tauseef, Fahima Tahir, and Ghousia Usman), Nov., 2281

Clothing insulation

Validation of a Clothing Heat Transfer Model in Nonisothermal Test Conditions (Meredith McQuerry), Jan., 1

Cluster analysis

An Evaluation of Vacation Lifestyle Scale—Using International and Theme Resort Hotels in Taiwan as Examples (S.-Y. Lin, P.-J. Juan, and T.-Y. Hsu), Jan., 331

Coarse aggregate

Assessment of Radioactivity in Concrete Made with e-Waste Plastic (K. Senthil Kumar, P. V. Premalatha, K. Baskar, G. Sankaran Pillai, and P. Shahul Hameed), Mar., 574

Coating

Improvement of Measuring Accuracy for Coating Covered on Conical Steel Shells by Correction of Eddy Current Signals (Meixian Wu, Dongli Zhang, Zhenmao Chen, and Yong Li), Jan., 17

Coefficient of variation

The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation (W. C. Yeong, S. L. Lim, M. B. C. Khoo, M. H. Chuah, and A. X. J. Lim), May, 1175

Cohesion

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Cohesion Weakening and Friction Strengthening criterion

Microcrack Growth Behavior and CWFS Criterion Parameters Optimization of Granite with PFC (Shengjun Miao, Hui Wang, Xuelian Guo, Mingchun Liang, and Changqing Kong), Nov., 2412

Cohesive property

Cohesive Property Evaluation of Crack Sealants Using a Low-Temperature Tensile Tester (Hengxiao Xue, Liping Cao, Xiangchen Hou, and Yiqiu Tan), Sep., 1983

Coil magnetization

Numerical Analysis of Magnetic Flux Leakage of Transverse Defects of Sucker Rod (Ou Zhang, Xueye Wei, and Shuxin Yan), Sep., 2265

Cold mix

Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications (M. Hasanuzzaman, L. Hashemian, and A. Bayat), Jan., 88

Cold treatment

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Colorimeter

An Innovative Method for Interpretation of Asphalt Boil Test (Akhtarhusein A. Tayebali, Abhilash Kusam, and Christopher Bacchi), Jul., 1622

Combustion

Performance, Combustion and Emission Characteristics of CI Engine Fueled with Sweet Lime Peel Oil (Citrus Limetta) (G. Logesh and Venkataramanan Madhavan), Sep., 1799

Production of *Garcinia gummi-gutta* Methyl Ester (GGME) as a Potential Alternative Feedstock for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics (Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac JoshuaRamesh Lalvani), Nov., 2661

Co-modified asphalt

Optimization on Additives of SBS and CTR for Interlayer Asphalt in Rigid-Flexible

Composite Pavement (Sheng Li, Fan Yang, and Zhao-Hui Liu), Mar., 593

Compaction

Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements (Z.-H. Nie, T. Jiao, X. Wang, and T. Qiu), Jan., 428

Compactors

Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements (Z.-H. Nie, T. Jiao, X. Wang, and T. Qiu), Jan., 428

Complementary exponential geometric distribution

A New Class of Beta-Complementary Exponential Power Series Distributions (E. Mahmoudi, R. S. Meshkat, and M. Entezari), Sep., 2171

Complementary exponential power series distributions

A New Class of Beta-Complementary Exponential Power Series Distributions (E. Mahmoudi, R. S. Meshkat, and M. Entezari), Sep., 2171

Complete stress-strain relationship

Derivation of Complete Stress-Strain Curve for SSTT-Confined High-Strength Concrete in Compression (H.-P. Lee, A. Z. Awang, W. Omar, and P. L. Y. Tiong), Jan., 168

Composite laminate

Non-Destructive Evaluation of the Bending-Fatigue Damage in Carbon-Fiber-Composite Laminates Based on Ultrasonic Wave Propagation (M. He and T. Yang), Mar., 647

Composite sample

Sampling Concrete from a Revolving Drum Truck Mixer (John J. Schemmel, Tiffany N. Kolba, Michael P. Salguero, and Matthew West), Nov., 2459

Comprehensive performance

Modification Mechanism and Performance of Qingchuan Rock Asphalt–Modified Asphalt (Limin Li, Zhaoyi He, Weidong Liu, Jianqing Jiang, and Cheng Hu), Jul., 1610

Compression-shear test

Fragmentation Evolution and Fractal Characteristics of Deep Rocks by Lab Compression-Shear Tests (Shuyun Zhu, Yun Wu, and Liangliang Lu), Jul., 1548

Compressive strength

Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles (WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and DaFu Cao), Nov., 2330 Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete (Behzad Hatami, Amir Mohammad Ramezanianpour, and Amir Saedi Daryan), Jan., 141

Long-Term Compressive Behavior of Concretes with Sugarcane Bagasse Ash as a Supplementary Cementitious Material (G. C. Cordeiro, O. A. Paiva, R. D. Toledo Filho, E. M. R. Fairbairn, and L. M. Tavares), Mar., 564

Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique (Surya Pratap Singh and Krishna Prapoorna Biligiri), Nov., 2440

Concave

Evaluation of Segregation in Asphalt Pavement Surface Using Concave Multifractal Distribution (Mao-ping Ran, Shenqing Xiao, Xing-lin Zhou, and Wang-xin Xiao), Sep., 2100

Concrete

Assessment of Radioactivity in Concrete Made with e-Waste Plastic (K. Senthil Kumar, P. V. Premalatha, K. Baskar, G. Sankaran Pillai, and P. Shahul Hameed), Mar., 574

A New Multicoefficients Creep Model for Concrete (Wenzhong Zheng and Can Tang), Jan., 199

A Novel Triaxial Test System for Concrete under Passive Confinement (Jiafei Jiang, Pingcheng Xiao, and Benben Li), May, 913 Charpy Impact Test Methods for Cementitious Composites: Review and Commentary (Robert J. Thomas and Andrew D. Sorensen), Nov., 2422

Experimental Study on Dynamic Strength Improvement Mechanism of Concrete Materials (Dong Lei, Jintao He, Feipeng Zhu, and Pengxiang Bai), Jan., 151

Sampling Concrete from a Revolving Drum Truck Mixer (John J. Schemmel, Tiffany N. Kolba, Michael P. Salguero, and Matthew West), Nov., 2459

Concrete durability

An Optical Fiber Sensor Method for Simultaneously Monitoring Corrosion and Structural Strain Induced by Loading (Jianghong Mao, Fangyuan Xu, Weiliang Jin, Qian Gao, Yidong Xu, and Chen Xu), Jul., 1443

Concrete hardener

Comparison Between Destructive and Nondestructive Tests in the Evaluation of Abrasion Resistance of Concrete (A. Meza, J. A. Ortiz, L. Peralta, and C. Sánchez), May, 906

Concrete pavements

A Test Protocol for Evaluating Absorption of Joints in Concrete Pavements (M. Tiznobaik and M. T. Bassuoni), Jul., 1636

Concrete reinforcement

Alternative Setup Apparatus to Test ASTM A944-10 Beam-End Specimens (Basso Trujillo Pasquale, René Malo, and Marc Jolin), Jul., 1741

Confidence interval

A Novel Approach to Evaluating the Performance of Physical Fitness by Combining Statistical Inference with the Radar Chart

(Yun-Tsan Lin, Tsang-Chuan Chang, and Kuen-Suan Chen), Jul., 1498

Confinement

Compressive Behavior of Cement Asphalt Mortar Under Low Confinement (X. Wu and J.-F. Wang), Jan., 108

Constant velocity joint

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Constitutive characterization

On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects (M. Saadati, P. Forquin, K. Weddfelt, P. L. Larsson, and F. Hild), Jan., 33

Constitutive equation

Theoretical Prediction of Forming Limit Diagrams for B1500HS Steel at Elevated Temperature Based on Modified Arrhenius and M–K Models (Hongli Hou, Huiping Li, and Lianfang He), Jul., 1684

Context-based adaptive binary arithmetic coding (CABAC)

A Comparative Evaluation Between CABAC and CAVLC (D. Ammous, F. Kammoun, and N. Masmoudi), May, 1111

Context-based adaptive variable length coding (CAVLC)

A Comparative Evaluation Between CABAC and CAVLC (D. Ammous, F. Kammoun, and N. Masmoudi), May, 1111

Continuous wavelet transform

Postweld Heat Treatment Characterization of Mild Steel (E6013) Welded Areas Using Wavelet Transform of Ultrasonic Testing Signals (Tariq M. R. Khan, Amna Maqsood, Saad A. Warraich, and Saeed Khalid), Sep., 2274

Conversion

Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete (Matthew P. Adams, Racheal D. Lute, Edward G. Moffatt, and Jason H. Ideker), Jul., 1659

Copper oxide

Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids (B. Anil Kumar Naik and A. V. Vinod), Mar., 445

Copyright

DNT-Based Image Illumination Refinement System with Concurrent Copyright Embedding (Jung-San Lee and Yi-Hua Wang), Sep., 2151

Corporate governance

Relationship among Market Value Added, Cash Value Added, and Corporate Governance: A Case of Taiwan during 2011–2012 (Mao-Chang Wang), Nov., 2641

Correction factor derivation

Derivation of Complete Stress-Strain Curve for SSTT-Confined High-Strength Concrete in Compression (H.-P. Lee, A. Z. Awang, W. Omar, and P. L. Y. Tiong), Jan., 168

Corrosion

An Optical Fiber Sensor Method for Simultaneously Monitoring Corrosion and Structural Strain Induced by Loading (Jianghong Mao, Fangyuan Xu, Weiliang Jin, Qian Gao, Yidong Xu, and Chen Xu), Jul., 1443
Assessment of Stress-Strain Behavior of Corroded Steel Reinforcement Using Digital Image Correlation (DIC) (Ranjitha Rajagopal, Sameer Sharma, Radhakrishna G. Pillai, and Sankara J. Subramanian), Sep., 1874

Countermeasure

Nature-Inspired Bridge Scour Countermeasures: Streamlining and Biocementation (Junliang Tao, Junhong Li, Xiangrong Wang, and Ruotian Bao), Jul., 1376

Coverage probability

Estimation of the Stress Strength Parameter for the Generalized Exponential-Poisson Distribution (S. Nadarajah, S. F. Bagheri, M. Alizadeh, and E. Bahrami Samani), Sep., 2184

Crack

An Experimental Study on Cement-Solidified Cd-Contaminated Soils under Drying-Wetting Cycles (Huikai Liu, Haijun Lu, Xiong Zhang, Jixiang Li, and Weiwei Wang), Mar., 493

Micromechanical Simulation of Influence Factors of Indirect Tensile Test of Asphalt Mixture (W. Liu, Y. Gao, and L. Li), Mar., 832

Using a Polymer-Based Sealant Material to Make Crack Repair of Asphalt Pavement (Jian Yin, Qiling Pang, Hao Wu, and Weimin Song), Sep., 2056

Crack arrest toughness

Effect of Impact Energy in ESSO Test (Part 2: Proposal of Validity Criteria of Impact Condition in ESSO Test by FEM Crack Propagation Analysis (Masahito Kaneko, Tomoya Kawabata, and Shuji Aihara), Sep., 1782

Crack development modes

Experimental Study on Dynamic Strength Improvement Mechanism of Concrete Materials (Dong Lei, Jintao He, Feipeng Zhu, and Pengxiang Bai), Jan., 151

Crack growth

Fatigue Crack Growth Testing and Evaluation for Aluminum Alloys at Temperatures of 25°C and -70°C (M. D. Liu and J. J. Xiong), Jul., 1698

Crack retardation

Effect of Tensile or Compressive Overload on the Fatigue Crack Growth of Friction Stir Welded 19501 Aluminum Alloy (Prakash Chandra Gope, Harshit Kumar, and Himanshu Purohit), Jan., 394

Crack propagation

Behavior and Law of Crack Propagation in the Dynamic-Static Superimposed Stress Field (Renshu Yang, Chenxi Ding, Liyun Yang, Yufei Zhang, and Peng Xu), Nov., 2540

Effect of Impact Energy in the Esso Test—Part 1: Basic Experiments and Validation of FEM Analysis (Tomoya Kawabata, Masahito Kaneko, and Shuji Aihara), Sep., 2203 Utilizing Digital Image Correlation (DIC) in Asphalt Pavement Testing (S. A. Safavizadeh, A. Wargo, and Y. Richard Kim), May, 984

Crack sealant

Cohesive Property Evaluation of Crack Sealants Using a Low-Temperature Tensile Tester (Hengxiao Xue, Liping Cao, Xiangchen Hou, and Yiqiu Tan), Sep., 1983

Crack velocity

Effect of Impact Energy in ESSO Test (Part 2: Proposal of Validity Criteria of Impact Condition in ESSO Test by FEM Crack Propagation Analysis (Masahito Kaneko, Tomoya Kawabata, and Shuji Aihara), Sep., 1782

Cracking

An Optical Fiber Sensor Method for Simultaneously Monitoring Corrosion and Structural Strain Induced by Loading (Jianghong Mao, Fangyuan Xu, Weiliang Jin, Qian Gao, Yidong Xu, and Chen Xu), Jul., 1443

Cracking resistance

Assessing Crack Susceptibility of Asphalt Concrete Mixtures with Overlay Tester (Victor M. Garcia, Alejandro Miramontes, Jose Garibay, Imad Abdallah, and Soheil Nazarian), May, 924

Creep fatigue interaction

Creep Fatigue Interaction under Different Test Variables: Mechanics and Mechanisms (Kaustav Barat, S. Sivaprasad, S. Kar, and S. Tarafder), Nov., 2521

Creep model

A New Multicoefficients Creep Model for Concrete (Wenzhong Zheng and Can Tang), Jan., 199

Crimping

Electromagnetic Crimping in Tube-to-Cylinder Configuration: Influence of the Base Profiles on the Joint Quality (R. Kumar and S. D. Kore), May, 1064

Criterion

Energy-Based Forming Mechanism and Criterion for Zonal Disintegration (Xuguang Chen, Ning Zhang, Mingsheng Zhang, Xiaodong Niu, and Yanlong Li), Sep., 1972

Critical plastic strain

Microcrack Growth Behavior and CWFS Criterion Parameters Optimization of Granite with PFC (Shengjun Miao, Hui Wang, Xuelian Guo, Mingchun Liang, and Changqing Kong), Nov., 2412

Critical water content

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Crumb rubber

Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties (Snehasish Mondal and Krishna Prapoorna Biligiri), May, 892

Crumb tire rubber

Optimization on Additives of SBS and CTR for Interlayer Asphalt in Rigid-Flexible Composite Pavement (Sheng Li, Fan Yang, and Zhao-Hui Liu), Mar., 593

Crystallinity

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Cultural product

Using the DEMATEL Method to Explore the Critical Factors That Influence Visitors to Purchase Museum Cultural Products (Chin-Tsai Lin, Chuan Lee, Sih-Wun Wang, and Yi-Hsueh Chen), Sep., 2045

Cumulative yield

Combined Effect of Heat Storage, Reflective Material, and Additional Heat Source on the Productivity of a Solar Still—Techno-Economic Approach (D. Dsilva Winfred Rufuss, S. Iniyan, and L. Suganthi), Nov., 2692

Curing

Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete (Matthew P. Adams, Racheal D. Lute, Edward G. Moffatt, and Jason H. Ideker), Jul., 1659

Cutting forces

Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron (Ş. Yazman, L. Gemı, M. Uludağ, A. Akdemır, M. Uyaner, and D. Dişpinar), May, 1012

Cyclic deformation

A Simple Approach to Performing Large Strain Cyclic Simple Shear Tests: Methodology and Experimental Results (Waqas Muhammad, Jidong Kang, Raja K. Mishra, and Kaan Inal), Nov., 2604

Cyclic loading

Investigation of Asphalt Track Behavior Under Cyclic Loading: Full-Scale Testing and Numerical Simulation (Seong-Hyeok Lee, Hai V. Vo, and Dae-Wook Park), May, 934

Cyclic triaxial

Preliminary Investigation of Predicting Permanent Deformations of Unbound Granular Materials Using Miniaturized Pressuremeter Cyclic Data (Alaa M. Shaban and Paul J. Cosentino), Sep., 1942

D

Damage mechanism

Impact Properties of Multi-Wall Carbon Nanotubes Modified Composites (Y. Yuan, X. Yao, Y. Ma, and B. Liu), May, 1261

Damage progression

Utilizing Digital Image Correlation (DIC) in Asphalt Pavement Testing (S. A. Safavizadeh, A. Wargo, and Y. Richard Kim), May, 984

Damage ratio

An Innovative Method for Interpretation of Asphalt Boil Test (Akhtarhusein A. Tayebali, Abhilash Kusam, and Christopher Bacchi), Jul., 1622

Data mining

Enhanced Artificial Bee Colony Algorithm for Liver Cancer Analysis (K. Lokanayaki and A. Malathi), May, 851

Dc potential drop

NDT of Cavity Defect in Metallic Plate Using dc Potential Drop Method (Xiaojuan Wang, Wenlu Cai, and Zhenmao Chen), Mar., 641

Dc-dc boost converter

Performance Evaluation of PV-Supported STATCOM for Voltage and Frequency Regulation of Standalone SEIG System (K. Tamilselvan and R. Anita), Jan., 266

Decision maker

Evaluating the Best Outsourcing Service Country in the Southeast Asian Region: A Fuzzy-AHP Approach (Van Kien Pham, Anh Tho Truong Hoang, and Ha Le Thi Thanh), Sep., 2227

Decision making

Decision Support System for Management Decision in High-Risk Business Environment (Ming-Fu Hsu and Chung-I Huang), Sep., 2240

Decision-Making, Trial, and Evaluation Laboratory (DEMATEL)

Who Is My Successor? Creating a Mentor–Protégé Selection and Evaluation Model Based on the Views of Mentors (C.-T. Lin and T.-T. Chang), May, 1158

Decolorization

Manihot esculenta Peel Powder: Effective Adsorbent for Removal of Various Textile Dyes from Aqueous Solutions (C. Parvathi, U. S. Shoba, C. Prakash, and S. Sivamani), Nov., 2299

Decreasing variance residual (DVR) class of life distribution

On the Properties of the UBAC(2) Class of Life Distributions (N. S. A. Ali), Mar., 730

Deep coalbed rocks

Fragmentation Evolution and Fractal Characteristics of Deep Rocks by Lab Compression-Shear Tests (Shuyun Zhu, Yun Wu, and Liangliang Lu), Jul., 1548

Deep crack

A Strategy for Inspection of Cracks in a Thick Structure Using an ECT Probe (M. Wu, D. Zhang, Z. Chen, and Y. Li), May, 1250

Deep tunnel

Energy-Based Forming Mechanism and Criterion for Zonal Disintegration (Xuguang Chen, Ning Zhang, Mingsheng Zhang, Xiaodong Niu, and Yanlong Li), Sep., 1972

Deflation

Iterative Kernel Principal Component for Large-Scale Data Set (Weiya Shi), Sep., 2130

Deformation strain

Correlation of Deformation Strain with the Tensile Properties and Fracture Mode of the AA 2014 Alloy Using Simulations and Experiments (T. R. Prabhu), May, 999

Degassing

Study of the Efficiency and Temperature Loss Caused by Degassing and Filtration of AlSi₉Cu₃ Alloy (C. Demian, D. Ferreño, E. Ruiz, and J. A. Casado), Mar., 772

Delphi method

A Sustainability Strategy Assessment Framework Model for Medical Tourism Supply Chain in Asia (K.-C. Chung and L.-C. Chang), Mar., 745

DEMATEL technique

Using the DEMATEL Method to Explore the Critical Factors That Influence Visitors to Purchase Museum Cultural Products (Chin-Tsai Lin, Chuan Lee, Sih-Wun Wang, and Yi-Hsueh Chen), Sep., 2045

Depth-from-focus

Depth-from-Focus-Based 3D Recon struction of Asphalt Pavement Micro-Texture (X. Cui, X. Zhou, J. Lou, J. Zhang, and M. Ran), Jan., 419

Desaturation

Desaturation for Liquefaction Mitigation Using Biogas Produced by *Pseudomonas* stutzeri (Erxing Peng, Dingwen Zhang, Wenbo Sun, and Guangyin Du), Jul., 1333

Design

Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability Evaluation of AISI-8620 Case-Hardening Steel (Muhammad Aqib Hassan, Muhammad Mehdi, Muhammad Owais, Muhammad Nasir, and Syed Muhammad Kumail Haider), Jan., 305

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Destructive test

Comparison Between Destructive and Nondestructive Tests in the Evaluation of Abrasion Resistance of Concrete (A. Meza, J. A. Ortiz, L. Peralta, and C. Sánchez), May, 906

Diese

Performance, Combustion and Emission Characteristics of CI Engine Fueled with Sweet Lime Peel Oil (Citrus Limetta) (G. Logesh and Venkataramanan Madhavan), Sep., 1799

Differential pulse code modulation (DPCM)

A Comparative Evaluation Between CABAC and CAVLC (D. Ammous, F. Kammoun, and N. Masmoudi), May, 1111

Differential scanning calorimetry test

Functional Layer Designation of Combined Chip Seal and Slurry Seal in Airport Pavement (Jie Yuan, Siyuan Xu, Xiangdao Hou, Feipeng Xiao, Changshan Jiang, and Yong Luo), May, 956

Diffusion

Evaluation of Asphalt Effect on Water Quality Using Leaching Test and Molecular Simulation (Jun Chen, Hao Wang, Jiantao Wu, and Guangji Xu), Sep., 2121

Digital array high-speed imaging system

Dynamic Fracture Characterization of Cantilever Structure Specimens with V-Notch Tips (Zhongwen Yue, Wang Zhang, Yao Song, Qingwen Hu, and Luzhou Xie), Jul., 1434

Digital high-speed camera

Development and Application of the New Explosive Loading Experimental System of Digital Laser Dynamic Caustics (Y. Wang), Mar., 680

Digital image correlation (DIC)

On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects (M. Saadati, P. Forquin, K. Weddfelt, P. L. Larsson, and F. Hild), Jan., 33

Strength of Aluminum Alloys Under Static Mixed-Mode I/II Loading Conditions (F. Tariq, M. Khan, M. Farhan, and M. Z. Siddiqui), Jan., 294

Utilizing Digital Image Correlation (DIC) in Asphalt Pavement Testing (S. A. Safavizadeh, A. Wargo, and Y. Richard Kim), May,

Digital image correlation

A Simple Approach to Performing Large Strain Cyclic Simple Shear Tests: Methodology and Experimental Results (Waqas Muhammad, Jidong Kang, Raja K. Mishra, and Kaan Inal), Nov., 2604

Digital Image Correlation

Assessment of Stress-Strain Behavior of Corroded Steel Reinforcement Using Digital Image Correlation (DIC) (Ranjitha Rajagopal, Sameer Sharma, Radhakrishna G. Pillai, and Sankara J. Subramanian), Sep., 1874

Digital image processing

Evaluation of Segregation in Asphalt Pavement Surface Using Concave Multifractal Distribution (Mao-ping Ran, Shenqing Xiao, Xing-lin Zhou, and Wang-xin Xiao), Sep., 2100

Dimension reduction

Principal Component Analysis Based on Marginal Density Ratios (W. Shi and J. Jiang), May, 1168

Directional solidification

Effect of Aluminum Content on Interfacial Reaction of Directionally Solidified TiAl Alloys (C. Cheng, Y. Sui, K. Feng, J. Qi, Y. He, Q. Meng, F. Wei, and Z. Sun), Mar., 764

Discrete element method

Micromechanical Simulation of Influence Factors of Indirect Tensile Test of Asphalt Mixture (W. Liu, Y. Gao, and L. Li), Mar., 832

Effects of Internal Structure on Anisotropic Creep Behavior of Asphalt Mixture Based on User-Defined Three-Dimensional Discrete Element Method (Deyu Zhang, Tao Ma, Xunhao Ding, Weiguang Zhang, and Xiaoming Huang), Jul., 1355

Discrete element modeling

Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique (Surya Pratap Singh and Krishna Prapoorna Biligiri), Nov., 2440

Dispersion

Evaluation of Nano-ZnO Dispersed State in Bitumen with Digital Imaging Processing Techniques (R. Li, Y. Dai, P. Wang, C. Sun, J. Zhang, and J. Pei), May, 974

Displacement

Evaluation of Bearing Capacity of Fly-Ash Highway Subgrade Based on Model Test (Wei Cui, Xiao Zheng, and Qian-qing Zhang), May, 943

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Displacement capacity

Definition and Quantification of Anchor Ductility and Implications on Seismic Design (P. Mahrenholtz and R. Eligehausen), Jan., 370

Distance Regularized Level Set Evolution

MRI Images Segmentation and 3D Reconstruction for Cerebral Cancer

Detection (Nadia Smaoui Zghal and Nabil Derbel), Nov., 2707

Distresses

Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications (M. Hasanuzzaman, L. Hashemian, and A. Bayat), Jan., 88

Distribution static compensator

Implementation of PV System Integrated DSTATCOM with Modified UVT Control Scheme for Harmonic and Neutral Current Elimination (P. Govindasamy and R. Anita), Sep., 1832

Double Niblack threshold-based

DNT-Based Image Illumination Refinement System with Concurrent Copyright Embedding (Jung-San Lee and Yi-Hua Wang), Sep., 2151

Double sampling plan

Sequential Sampling Plan in the Truncated Life Test for Weibull Distribution (Hasan Rasay, Morteza Pourgharibshahi, and Mohammad Saber Fallahnezhad), Mar., 693

Driving simulator

Physiological Information for Pavement Ride Quality Verification (K. Tomiyama and A. Kawamura), Jan., 227

Drying-wetting cycle

An Experimental Study on Cement-Solidified Cd-Contaminated Soils under Drying-Wetting Cycles (Huikai Liu, Haijun Lu, Xiong Zhang, Jixiang Li, and Weiwei Wang), Mar., 493

Dual boost converter

Performance Evaluation of Standalone Photovoltaic System with Isolated Dual-Inductor dc-dc Converter for Water-Pumping Application (M. Mohammadha Hussaini and A. Josephine Amala), May, 1122

Dual boost isolated micro-inverter

PV Module Integrated Dual Boost Isolated dc-dc Converter Fed Three-Phase Micro-Inverter (P. Geetha and S. Ravi), May, 1145

Dual inductor

Performance Evaluation of Standalone Photovoltaic System with Isolated Dual-Inductor dc-dc Converter for Water-Pumping Application (M. Mohammadha Hussaini and A. Josephine Amala), May, 1122

Dual-energy X-ray

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

Ductile fracture

Modeling of Anisotropic Behavior of Aluminum Alloys to Investigate Ductile Fracture for the Improved Formability in the Upsetting Process (H. K. Chirala, M. J. Davidson,

G. Srinivasarao, and P. Srinivasaraju), May, 1054

Ductile irons

Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron (Ş. Yazman, L. Gemi, M. Uludağ, A. Akdemir, M. Uyaner, and D. Dişpinar), May, 1012

Ductility

Definition and Quantification of Anchor Ductility and Implications on Seismic Design (P. Mahrenholtz and R. Eligehausen), Jan., 370

Durability

A Test Protocol for Evaluating Absorption of Joints in Concrete Pavements (M. Tiznobaik and M. T. Bassuoni), Jul., 1636

Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete (Behzad Hatami, Amir Mohammad Ramezanianpour, and Amir Saedi Daryan), Jan., 141

Resistivity, Penetrability and Porosity of Concrete: A Tripartite Relationship (A. Bediwy and M. T. Bassuoni), Mar., 549

Durometer scale conversion

Exact Analytical Durometer Hardness Scale Interconversion (P. H. Gilbert and A. J. Giacomin), Sep., 1995

Durometry

Exact Analytical Durometer Hardness Scale Interconversion (P. H. Gilbert and A. J. Giacomin), Sep., 1995

Dwell mechanism

Creep Fatigue Interaction under Different Test Variables: Mechanics and Mechanisms (Kaustav Barat, S. Sivaprasad, S. Kar, and S. Tarafder), Nov., 2521

Dyes

Manihot esculenta Peel Powder: Effective Adsorbent for Removal of Various Textile Dyes from Aqueous Solutions (C. Parvathi, U. S. Shoba, C. Prakash, and S. Sivamani), Nov., 2299

Dynamic caustics

Development and Application of the New Explosive Loading Experimental System of Digital Laser Dynamic Caustics (Y. Wang), Mar., 680

Dynamic compressive tests

Mini Round-Robin Test on the Split Hopkinson Pressure Bar (M. A. Kariem, D. Ruan, J. H. Beynon, and D. A. Prabowo), Mar., 457

Dynamic creep test

Evaluating the Rutting Performance of Geosynthetic Reinforced Pavement Containing Rubberized Asphalt Mixtures (A. K. Khiavi, B. Bakhshi, and V. Hojjat), Mar., 610

Dynamic force verification

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Dynamic modulus

Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures (D. J. Mensching, M. M. Jeong, and L. Myers McCarthy), Jan., 127

Dynamic strain response

Dynamic Response of Shallow-Buried Tunnels under Asymmetrical Pressure Distributions (X. L. Jiang, F. F. Wang, H. Yang, P. Y. Lian, J. Chen, J. Y. Niu, and G. C. Sun), Jul., 1574

Dynamic strength improvement

Experimental Study on Dynamic Strength Improvement Mechanism of Concrete Materials (Dong Lei, Jintao He, Feipeng Zhu, and Pengxiang Bai), Jan., 151

Dynamic stress intensity factor

Behavior and Law of Crack Propagation in the Dynamic-Static Superimposed Stress Field (Renshu Yang, Chenxi Ding, Liyun Yang, Yufei Zhang, and Peng Xu), Nov., 2540

Dynamic Fracture Characterization of Cantilever Structure Specimens with V-Notch Tips (Zhongwen Yue, Wang Zhang, Yao Song, Qingwen Hu, and Luzhou Xie), Jul., 1434

Effect of Impact Energy in ESSO Test (Part 2: Proposal of Validity Criteria of Impact Condition in ESSO Test by FEM Crack Propagation Analysis (Masahito Kaneko, Tomoya Kawabata, and Shuji Aihara), Sep., 1782

Dynamic water pressure tester

Assessing Moisture Sensitivity of Rubberized Warm Mix Asphalt Mixtures Using the Surface Free Energy Method and Dynamic Water Pressure Tester (Jiangmiao Yu, Chunlong Xiong, Xiaoning Zhang, Zhesheng Ge, and Guanfeng An), Mar., 580

E

Earthwork

Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements (Z.-H. Nie, T. Jiao, X. Wang, and T. Qiu), Jan., 428

Ease of opening

Seal Strength Evaluation of Flexible Plastic Films by Machine Testing and Human Peeling (Somporn Nilmanee, Tunyarut Jinkarn, Lerpong Jarupan, Supachai Pisuchpen, and Alaster Yoxall), Jul., 1508

Ecological pattern

Linking Ecology and Service Function in Scenic Road Landscape Planning: A Spatial Analysis Approach (Xiaochun Qin, Shengnan Cui, and Shu Liu), Jul., 1297

Economic design

The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation (W. C. Yeong, S. L. Lim, M. B. C. Khoo, M. H. Chuah, and A. X. J. Lim), May, 1175

Economic statistical design

Multi-Objective Genetic Algorithm for Economic Statistical Design of the T^2 Control Chart with Variable Sample Size: The Updated Markov Chain Approach (Asghar Seif), May, 1209

Economic-statistical design

The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation (W. C. Yeong, S. L. Lim, M. B. C. Khoo, M. H. Chuah, and A. X. J. Lim), May, 1175

Eddy current testing

Improvement of Measuring Accuracy for Coating Covered on Conical Steel Shells by Correction of Eddy Current Signals (Meixian Wu, Dongli Zhang, Zhenmao Chen, and Yong Li), Jan., 17

Eddy current testing technology

A Strategy for Inspection of Cracks in a Thick Structure Using an ECT Probe (M. Wu, D. Zhang, Z. Chen, and Y. Li), May, 1250

Effective foaming area

Evaluation for VOF Simulation of Flow Field in Asphalt Foaming Chamber Based on Volume Fraction (Fu-Min Liu, An-Lin Wang, and Zhen-Sheng Fu), Jul., 1391

Effective thermal conductivity

Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids (B. Anil Kumar Naik and A. V. Vinod), Mar., 445

Effectiveness

Experimental Study of Micropile Lateral Resistance Effectiveness (Y. Du, M. Bai, Y. Chen, X. Wang, and Z. Li), Mar., 523

Efficiency

Testing Behavior of the Mean Inactivity Time (M. Kayid and S. Izadkhah), Nov., 2649

Elastic constants

3D Quasi-Static Strengths and Elastic Constants of Glass Fiber Reinforced Polyester Composite Extracted From a Wind Turbine Blade (H. G. Kotik and J. E. Perez Ipiña), Jan., 55

Elastic modulus

Exact Analytical Durometer Hardness Scale Interconversion (P. H. Gilbert and A. J. Giacomin), Sep., 1995

Elastic recovery

Nonrecoverable Compliance and Recovery Behavior of Polymer-Modified and Reclaimed Asphalt Pavement (RAP)–Modified Binders in Arkansas (Mohammed Ziaur Rahaman, Zahid Hossain, and Musharraf Zaman), Nov., 2483

Electric breakdown

A Strategy to Determine Partial Discharge in XLPE Power Cables Using Acoustic Emission Detection Technique (D. F. Jingle Jabha, K. Selvi, and R. Joselin), Jan., 283

Electrical cables

Assessment of Hazardous Substances in Electrical Cables: Implementation of RoHS Regulations in India (U. Rambabu, V. Balaram, R. Ratheesh, S. Chatterjee, M. Kishore Babu, and N. R. Munirathnam), Sep., 1930

Electrical resistance

Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete (Behzad Hatami, Amir Mohammad Ramezanianpour, and Amir Saedi Daryan), Jan., 141

Electrical resistivity

Prediction of Mechanical Performance of Cemented Paste Backfill by the Electrical Resistivity Measurement (Wenbin Xu, Xichun Tian, and Changbing Wan), Nov., 2450

Electro encephalographic

Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System (R. Velumani, M. Vijayakumar, and M. Ramasamy), Mar., 469

Electromagnetic crimping

Electromagnetic Crimping in Tube-to-Cylinder Configuration: Influence of the Base Profiles on the Joint Quality (R. Kumar and S. D. Kore), May, 1064

Electronic waste

Assessment of Radioactivity in Concrete Made with e-Waste Plastic (K. Senthil Kumar, P. V. Premalatha, K. Baskar, G. Sankaran Pillai, and P. Shahul Hameed), Mar., 574

Embankment

Evaluation of Bearing Capacity of Fly-Ash Highway Subgrade Based on Model Test (Wei Cui, Xiao Zheng, and Qian-qing Zhang), May, 943

Embrittlement temperature

Nondestructive Acoustic Emission Test to Evaluate Thermal Damage in Asphalt Concrete Materials (Behzad Behnia, William G. Buttlar, and Henrique Reis), Jan., 118

Emission

Performance, Combustion and Emission Characteristics of CI Engine Fueled with Sweet Lime Peel Oil (Citrus Limetta) (G. Logesh and Venkataramanan Madhavan), Sep., 1799

Production of *Garcinia gummi-gutta* Methyl Ester (GGME) as a Potential Alternative Feedstock

for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics (Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac JoshuaRamesh Lalvani), Nov., 2661

Emotional based intelligent controller

Concert and Analysis of Auto-Tuning Dual-Feedback Biological Harmonic Controller for Industrial Claims (P. M. Balasubramaniam and M. Srinivasan), May, 1136

Empirical correlation

Advanced Method for Quantifying Socket Roughness and Empirical Correlations (Byeong-Han Jeon, Chae-Min Kim, and Yongkyu Choi), Nov., 2399

Emulsified bioasphalt

Optimization of Laboratory Preparation of the Emulsified Bioasphalt with Two Emulsifiers (Xi Chen, Hainian Wang, Qinghua Wang, Xu Yang, and Zhanping You), Jul., 1343

Emulsifier

Optimization of Laboratory Preparation of the Emulsified Bioasphalt with Two Emulsifiers (Xi Chen, Hainian Wang, Qinghua Wang, Xu Yang, and Zhanping You), Jul., 1343

Enclosures

Review of Design, Construction, and Capabilities of an Air Bladder Load Test Facility (ABLTF) at BCERL for Structural Experimental Enclosure Studies (Ali M. Memari, Thomas Kuczynski, and Ryan L. Solnosky), Jul., 1421

Energy

Energy and Exergy Efficiency of Flat Plate PVT Collector With Forced Convection (B. Srimanickam, M. M. Vijayalakshmi, and E. Natarajan), Mar., 783

Energy conservation

Energy-Based Forming Mechanism and Criterion for Zonal Disintegration (Xuguang Chen, Ning Zhang, Mingsheng Zhang, Xiaodong Niu, and Yanlong Li), Sep., 1972

Energy efficiency

Improvement of Energy Efficiency Using a Multi-Input Fuzzy Logic Controller in a Stone Cutting Machine (Said Mahmut Cinar, Hasan Cimen, and I. Sedat Buyuksagis), Nov., 2364

Engine performance

Performance, Combustion and Emission Characteristics of CI Engine Fueled with Sweet Lime Peel Oil (Citrus Limetta) (G. Logesh and Venkataramanan Madhavan), Sep., 1799

Engineered cementitious composites

Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles (WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and DaFu Cao), Nov., 2330

Enhanced artificial bee colony (EABC) algorithm

Enhanced Artificial Bee Colony Algorithm for Liver Cancer Analysis (K. Lokanayaki and A. Malathi), May, 851

Ensemble classifiers

Enhanced Artificial Bee Colony Algorithm for Liver Cancer Analysis (K. Lokanayaki and A. Malathi), May, 851

Environmental pollution

Assessment of Hazardous Substances in Electrical Cables: Implementation of RoHS Regulations in India (U. Rambabu, V. Balaram, R. Ratheesh, S. Chatterjee, M. Kishore Babu, and N. R. Munirathnam), Sep., 1930

Epileptic seizure

Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System (R. Velumani, M. Vijayakumar, and M. Ramasamy), Mar., 469

Epoxy resin

Synthesis and Performance Evaluation of Epoxy Resin–Modified Shape Memory Polyurethane Sealant (Dongya Shen, Shuang Shi, and Tao Xu), Jul., 1452

Equibiaxial tensile test

Development of an Equibiaxial Tensile Test Device and Associated Test Method for Parameter Identification of Hyperelastic Ogden Model of Soft Material (Jonas A. Pramudita, Harutaka Kubota, Yuji Tanabe, Masato Ito, and Ryoji Watanabe), Jan., 77

Equivalent plastic parameters

Microcrack Growth Behavior and CWFS Criterion Parameters Optimization of Granite with PFC (Shengjun Miao, Hui Wang, Xuelian Guo, Mingchun Liang, and Changqing Kong), Nov., 2412

Esso test

Effect of Impact Energy in the Esso Test—Part 1: Basic Experiments and Validation of FEM Analysis (Tomoya Kawabata, Masahito Kaneko, and Shuji Aihara), Sep., 2203

Estimation

A New Mixed Poisson Distribution: Modeling and Applications (Mina Habibi and Akbar Asgharzadeh), Jul., 1728

Evaluation method

Cohesive Property Evaluation of Crack Sealants Using a Low-Temperature Tensile Tester (Hengxiao Xue, Liping Cao, Xiangchen Hou, and Yiqiu Tan), Sep., 1983

Exergy

Energy and Exergy Efficiency of Flat Plate PVT Collector With Forced Convection (B. Srimanickam, M. M. Vijayalakshmi, and E. Natarajan), Mar., 783

Experimental modal analysis

Experimental and Analytical Modal Analysis of Cantilever Beam for Vibration Based Damage Identification Using Artificial Neural Network (P. S. Rao, V. Ramakrishna, and N. V. D. Mahendra), Mar., 656

Experimental study

Experimental Study on Mechanical Property of Honeycombed-Core Girderless Floor with Four Edges Simply Supported (W. Yang, P. Jiang, and B. Han), Mar., 485

Explosion

Development and Application of the New Explosive Loading Experimental System of Digital Laser Dynamic Caustics (Y. Wang), Mar., 680

Explosives

Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images (Jack L. Glover, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1462

Exponential distribution

Testing Behavior of the Mean Inactivity Time (M. Kayid and S. Izadkhah), Nov., 2649

External standard method

Rietveld Quantitative Stability of Portland Blast Furnace Slag Cement Between Internal and External Standard Methods (P. Zhao, X. Liu, L. Lu, and P. Wang), Jan., 191

Extraction temperature

Case Study: Evaluation of the Effect of Extraction Temperature on WMA Binder Containing Sasobit Additive (Shenghua Wu, Weiguang Zhang, Shihui Shen, and Balasingam Muhunthan), Sep., 2140

F

Fabrication

Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability Evaluation of AISI-8620 Case-Hardening Steel (Muhammad Aqib Hassan, Muhammad Mehdi, Muhammad Owais, Muhammad Nasir, and Syed Muhammad Kumail Haider), Jan., 305

Failur

Comparison of Mode II Fracture Toughness Test Methods for Wood and Wood-Based Composites (Milad Mohamadzadeh and Daniel Hindman), Sep., 1770

Failure-correlated load

Development of Accelerated Durability Tests for Rear Suspension Components under Failure-Correlated Load (Li-Hui Zhao, Jia-Wei Yu, Tie Chen, Jun Li, and Song-Lin Zheng), Sep., 1862

Falling weight deflectometer (FWD)

A Study of the Structural Performance of Flexible Pavements Using Traffic Speed Deflectometer (S. Manoharan, G. Chai, S. Chowdhury, and A. Golding), May, 1280

Falling weight deflectometer

Field Evaluation of Load-Bearing Capacity of Tire Fill Embankment Pavements (Leila Hashemian and Alireza Bayat), Sep., 1901

Fatigue

Fatigue Crack Growth Testing and Evaluation for Aluminum Alloys at Temperatures of 25°C and -70°C (M. D. Liu and J. J. Xiong), Jul., 1698

Modification Mechanism and Performance of Qingchuan Rock Asphalt–Modified Asphalt (Limin Li, Zhaoyi He, Weidong Liu, Jianqing Jiang, and Cheng Hu), Jul., 1610 Variable Slip Ratio Rolling Contact Fatigue Tester (Marcellin Zahui, Satyam Deshmukh, and Subodh Subedi), May, 1042

Fatigue crack growth

Fracture-Toughness and Fatigue Crack Growth Evaluation in the Transversal Direction of the Longitudinal Weld of an API X52 Steel Pipeline (D. Angeles-Herrera, A. Albiter, R. Cuamatzi-Meléndez, G. Terán, and Gilberto Ochoa-Ruiz), Sep., 2110

Fatigue crack on gear

Pitting Formation in Concave-Convex Gears Manufactured from AISI 8620 Steel (Mahir Uzun, Mehmet Mehdi Münis, and Hayrettin Düzcükoğlu), Jul., 1708

Fatigue cracking

Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation (Sampat Kedarisetty, Gourab Saha, Krishna Prapoorna Biligiri, and Jorge B. Sousa), Nov., 2511

Fatigue damage

Fatigue Damage Characteristics Considering the Difference of Tensile-Compression Modulus for Asphalt Mixture (Songtao Lv, Xiaoyang Wang, Chaochao Liu, and Shuangshuang Wang), Nov., 2470

Fatigue life

Evaluating the Effect of High RAP Content on Asphalt Mixtures and Binders Fatigue Behavior (Umme Amina Mannan, Hasan M. Faisal, Md Mehedi Hasan, and Rafiqul A. Tarefder), Sep., 1749

Fatigue Damage Characteristics Considering the Difference of Tensile-Compression Modulus for Asphalt Mixture (Songtao Lv, Xiaoyang Wang, Chaochao Liu, and Shuangshuang Wang), Nov., 2470

Fatigue Performance of Vertical Vibration Compacted Cement-Stabilized Recycled Pavement Materials (Yingjun Jiang, Haipeng Liu, and Jinshun Xue), Sep., 2251

Fault detection

A Strategy to Determine Partial Discharge in XLPE Power Cables Using Acoustic Emission Detection Technique (D. F. Jingle Jabha, K. Selvi, and R. Joselin), Jan., 283

Feature extraction

Evaluating Various Lung Cancer Nodule Detection Techniques—A Comparative Study (G. Usman, M. A. Fahiem, S. Farhan, and H. Tauseef), Mar., 798

Textural and Geometrical Features Based Approach for Identification of Individuals Using Palmprint and Hand Shape Images from Multiple Multimodal Datasets (Anum Shaukat, Saima Farhan, Muhammad Abuzar Fahiem, Huma Tauseef, Fahima Tahir, and Ghousia Usman), Nov., 2281

Feature selection

Principal Component Analysis Based on Marginal Density Ratios (W. Shi and J. Jiang), May, 1168

FEM model

Correlation of Deformation Strain with the Tensile Properties and Fracture Mode of the AA 2014 Alloy Using Simulations and Experiments (T. R. Prabhu), May, 999

Ferric oxide

Production of *Garcinia gummi-gutta* Methyl Ester (GGME) as a Potential Alternative Feedstock

for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics (Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac JoshuaRamesh Lalvani), Nov., 2661

Fiber-reinforced

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Fidelity range extensions (FRExt)

A Comparative Evaluation Between CABAC and CAVLC (D. Ammous, F. Kammoun, and N. Masmoudi), May, 1111

Field investigation

Cohesive Property Evaluation of Crack Sealants Using a Low-Temperature Tensile Tester (Hengxiao Xue, Liping Cao, Xiangchen Hou, and Yiqiu Tan), Sep., 1983

Field test

Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements (Z.-H. Nie, T. Jiao, X. Wang, and T. Qiu), Jan., 428 Soil Arching Effect Analysis via a Modified Finite Element Model Based on a Field Test (Xiangdong Li, Yu Miao, and Ke Cheng), Sep., 2218

Fills

Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements (Z.-H. Nie, T. Jiao, X. Wang, and T. Qiu), Jan., 428

Filtration

Study of the Efficiency and Temperature Loss Caused by Degassing and Filtration of AlSi₉Cu₃ Alloy (C. Demian, D. Ferreño, E. Ruiz, and J. A. Casado), Mar., 772

Fine-grained soils

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Finely ground limestone

Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete (Matthew P. Adams, Racheal D. Lute, Edward G. Moffatt, and Jason H. Ideker), Jul., 1659

Finite element analysis

Development of an Équibiaxial Tensile Test Device and Associated Test Method for Parameter Identification of Hyperelastic Ogden Model of Soft Material (Jonas A. Pramudita, Harutaka Kubota, Yuji Tanabe, Masato Ito, and Ryoji Watanabe), Jan., 77

Finite element method

Effect of Impact Energy in ESSO Test (Part 2: Proposal of Validity Criteria of Impact Condition in ESSO Test by FEM Crack Propagation Analysis (Masahito Kaneko, Tomoya Kawabata, and Shuji Aihara), Sep., 1782

Finite element simulation

The Effects of Anisotropic Yield Functions on Plastic Behavior of 304 Stainless Steel (Bora Sener and Mehmet Emin Yurci), Nov., 2584

Finite-element analysis (FEA)

Experimental Study on Mechanical Property of Honeycombed-Core Girderless Floor with Four Edges Simply Supported (W. Yang, P. Jiang, and B. Han), Mar., 485

Finite-element modeling

Evaluating the Rutting Performance of Geosynthetic Reinforced Pavement Containing Rubberized Asphalt Mixtures (A. K. Khiavi, B. Bakhshi, and V. Hojjat), Mar., 610

Finite-element simulations

Mechanical Characterization of Granite Rock Materials: On the Influence from Pre-Existing Defects (D. Jelagin, M. Saadati, I. Jerjen, and P.-L. Larsson), Mar., 540

Fins and baffles

Energy and Exergy Efficiency of Flat Plate PVT Collector With Forced Convection (B. Srimanickam, M. M. Vijayalakshmi, and E. Natarajan), Mar., 783

Fit theory

Decision Support System for Management Decision in High-Risk Business Environment (Ming-Fu Hsu and Chung-I Huang), Sep., 2240

Fixture

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Flexible

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Flexible pavement

Flexible Pavement Interface Bonding: Theoretical Analysis and Shear-Strength Measurement (H. Wang, G. Xu, Z. Wang, and T. Bennert), Jan., 99

Flexible plastic

Seal Strength Evaluation of Flexible Plastic Films by Machine Testing and Human Peeling (Somporn Nilmanee, Tunyarut Jinkarn, Lerpong Jarupan, Supachai Pisuchpen, and Alaster Yoxall), Jul., 1508

Flexural strength

Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles (WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and DaFu Cao), Nov., 2330

Flexure bending test

Using a Polymer-Based Sealant Material to Make Crack Repair of Asphalt Pavement (Jian Yin, Qiling Pang, Hao Wu, and Weimin Song), Sep., 2056

Fly ash

Evaluation of Bearing Capacity of Fly-Ash Highway Subgrade Based on Model Test (Wei Cui, Xiao Zheng, and Qian-qing Zhang), May, 943

Force output

A Design of an Instrument Based on a Piezoelectric Actuator to Study the Force Output of Piezoelectric Ceramic (Zhichao Pei, Weibin Rong, Lefeng Wang, Shupeng Wang, and Lining Sun), Sep., 1852

Formability

Modeling of Anisotropic Behavior of Aluminum Alloys to Investigate Ductile Fracture for the Improved Formability in the Upsetting Process (H. K. Chirala, M. J. Davidson, G. Srinivasarao, and P. Srinivasaraju), May, 1054

Forming limit diagrams

Theoretical Prediction of Forming Limit Diagrams for B1500HS Steel at Elevated Temperature Based on Modified Arrhenius and M–K Models (Hongli Hou, Huiping Li, and Lianfang He), Jul., 1684

Four-point bending

Standard Testing of Glass Revisited - Experimental and Theoretical Aspects (David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica), Sep., 1819

Fractal characteristics

Fragmentation Evolution and Fractal Characteristics of Deep Rocks by Lab Compression-Shear Tests (Shuyun Zhu, Yun Wu, and Liangliang Lu), Jul., 1548

Fractographic analysis

Fracture-Toughness and Fatigue Crack Growth Evaluation in the Transversal Direction of the Longitudinal Weld of an API X52 Steel Pipeline (D. Angeles-Herrera, A. Albiter, R. Cuamatzi-Meléndez, G. Terán, and Gilberto Ochoa-Ruiz), Sep., 2110

Fractography

Correlation of Deformation Strain with the Tensile Properties and Fracture Mode of the AA 2014 Alloy Using Simulations and Experiments (T. R. Prabhu), May, 999

Fracture characteristics

Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation (Sampat Kedarisetty, Gourab Saha, Krishna Prapoorna Biligiri, and Jorge B. Sousa), Nov., 2511

Fracture toughness

Comparison of Mode II Fracture Toughness Test Methods for Wood and Wood-Based Composites (Milad Mohamadzadeh and Daniel Hindman), Sep., 1770

Fracture-Toughness and Fatigue Crack Growth Evaluation in the Transversal Direction of the Longitudinal Weld of an API X52 Steel Pipeline (D. Angeles-Herrera, A. Albiter, R. Cuamatzi-Meléndez, G. Terán, and Gilberto Ochoa-Ruiz), Sep., 2110

Fragmentation evolution

Fragmentation Evolution and Fractal Characteristics of Deep Rocks by Lab Compression-Shear Tests (Shuyun Zhu, Yun Wu, and Liangliang Lu), Jul., 1548

Frangible leg model

Blast Performance of Demining Footwear: Numerical and Experimental Trials on Frangible Leg Model and Injury Modeling (M. Karahan, E. A. Karahan, and N. Karahan), Mar., 666

Freeze thaw

Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications (M. Hasanuzzaman, L. Hashemian, and A. Bayat), Jan., 88

Freeze-thaw cycle

Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles (WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and DaFu Cao), Nov., 2330

Freezing (thawing) index

Evolution of the Temperature Field of the Subgrade in the Permafrost Regions of the Great Khingan Mountains (Haiping Liu, Lin Ding, Yang Yang, Meng Guo, and Yiqi Wang), Nov., 2319

Freezing-thawing properties

Bonding Durability of Two Repair Mortars with Low Modulus Cement and Asphalt Mortar (CA Mortar) (Liu Yunpeng, Wang Fazhou, Hu Shuguang, and Liu Muyu), Jan., 67

Friction

Modeling of Anisotropic Behavior of Aluminum Alloys to Investigate Ductile Fracture for the Improved Formability in the Upsetting Process (H. K. Chirala, M. J. Davidson, G. Srinivasarao, and P. Srinivasaraju), May, 1054

Friction stir welding

Effect of Tensile or Compressive Overload on the Fatigue Crack Growth of Friction Stir Welded 19501 Aluminum Alloy (Prakash Chandra Gope, Harshit Kumar, and Himanshu Purohit), Jan., 394

Friction torque

Analysis and Prediction for Time Series on Torque Friction of Rolling Bearings (X. Xia, Z. Chang, Y. Li, L. Ye, and M. Qiu), May, 1022

Full-scale testing

Investigation of Asphalt Track Behavior Under Cyclic Loading: Full-Scale Testing and Numerical Simulation (Seong-Hyeok Lee, Hai V. Vo, and Dae-Wook Park), May, 934

Functional layer

Functional Layer Designation of Combined Chip Seal and Slurry Seal in Airport Pavement (Jie Yuan, Siyuan Xu, Xiangdao Hou, Feipeng Xiao, Changshan Jiang, and Yong Luo), May, 956

Fuzzy analytic hierarchy process

Evaluating the Best Outsourcing Service Country in the Southeast Asian Region: A Fuzzy-AHP Approach (Van Kien Pham, Anh Tho Truong Hoang, and Ha Le Thi Thanh), Sep., 2227

Fuzzy C-Means

MRI Images Segmentation and 3D Reconstruction for Cerebral Cancer Detection (Nadia Smaoui Zghal and Nabil Derbel), Nov., 2707

Fuzzy logic controller

Improvement of Energy Efficiency Using a Multi-Input Fuzzy Logic Controller in a Stone Cutting Machine (Said Mahmut Cinar, Hasan Cimen, and I. Sedat Buyuksagis), Nov., 2364

Performance Evaluation of PV-Supported STATCOM for Voltage and Frequency Regulation of Standalone SEIG System (K. Tamilselvan and R. Anita), Jan., 266

Voltage Sensorless Controller for Photovoltaic Integrated Shunt Active Power Filter for Enhancement of Power Quality (C. Ramakrishnan and R. Pradeep), Jan., 252

G

GBF-NLSVM

Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System (R. Velumani, M. Vijayakumar, and M. Ramasamy), Mar., 469

Generalized pivot variables

Interval Estimation of Quantile Difference in the Two-Parameter Exponential Distributions (Ayman Baklizi), Nov., 2654

Genetic data

Evaluating Various Lung Cancer Nodule Detection Techniques—A Comparative Study (G. Usman, M. A. Fahiem, S. Farhan, and H. Tauseef), Mar., 798

Geosynthetic

Evaluating the Rutting Performance of Geosynthetic Reinforced Pavement Containing Rubberized Asphalt Mixtures (A. K. Khiavi, B. Bakhshi, and V. Hojjat), Mar., 610

Girderless floor

Experimental Study on Mechanical Property of Honeycombed-Core Girderless Floor with Four Edges Simply Supported (W. Yang, P. Jiang, and B. Han), Mar., 485

Glass fiber

3D Quasi-Static Strengths and Elastic Constants of Glass Fiber Reinforced Polyester Composite Extracted From a Wind Turbine Blade (H. G. Kotik and J. E. Perez Ipiña), Jan., 55

Glass plate

Standard Testing of Glass Revisited - Experimental and Theoretical Aspects (David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica), Sep., 1819

Grain refinement

Determination of the Cavitation Range of Power Ultrasound in an Aluminum Alloy Melt (Sichao Su, Xiaoqian Li, Ruiqing Li, and Wu Zhang), Nov., 2616

Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy (Muhammet Uludağ, Şakir Yazman, Lokman Gemi, Barış Bakircioğlu, Eray Erzi, and Derya Dispinar), Nov., 2592

Grain-water interaction

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Gram matrix

Iterative Kernel Principal Component for Large-Scale Data Set (Weiya Shi), Sep., 2130

Granite grains size distribution

Experimental Study on Impact Crushing of Granite Particles (Jian-hong Yang, Qi Chen, Jian-hua Zhou, and Huai-ying Fang), Nov., 2376

Granite

Mechanical Characterization of Granite Rock Materials: On the Influence from Pre-Existing Defects (D. Jelagin, M. Saadati, I. Jerjen, and P.-L. Larsson), Mar., 540 On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects (M. Saadati, P. Forquin, K. Weddfelt, P. L. Larsson, and F. Hild), Jan., 33

Granular materials

Effect of Sample Reconstitution Methods on the Behaviors of Granular Materials under Shearing (Yao Li, Yunming Yang, Hai-Sui Yu, and Gethin Roberts), Nov., 2718

Great Khingan Mountains

Evolution of the Temperature Field of the Subgrade in the Permafrost Regions of the Great Khingan Mountains (Haiping Liu, Lin Ding, Yang Yang, Meng Guo, and Yiqi Wang), Nov., 2319

Green pavements

Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties (Snehasish Mondal and Krishna Prapoorna Biligiri), May, 892

Ground improvement

Guidance for Investigating Calcite Precipitation by Urea Hydrolysis for Geomaterials (B. S. Shashank, James M. Minto, Devendra Narain Singh, Gráinne El Mountassir, and Charles W. Knapp), Jul., 1527

Ground loss

Effect of Closely Spaced Twin Tunnel Construction beneath an Existing Subway Station: A Case Study (Xu Zhang, Chengping Zhang, and Jianchen Wang), Jul., 1559

Groundwater pollution

Research on Nitrate Removal by Graphene Loaded With Iron Nanoparticles for Groundwater Remediation (Y. Wang, S. Yang, C. Gao, B. Li, and G. Ji), Mar., 435

Η

H.264/AVC

A Comparative Evaluation Between CABAC and CAVLC (D. Ammous, F. Kammoun, and N. Masmoudi), May, 1111

Hard phase

Synthesis and Performance Evaluation of Epoxy Resin–Modified Shape Memory Polyurethane Sealant (Dongya Shen, Shuang Shi, and Tao Xu), Jul., 1452

Hardenability

Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability Evaluation of AISI-8620 Case-Hardening Steel (Muhammad Aqib Hassan, Muhammad Mehdi, Muhammad Owais, Muhammad Nasir, and Syed Muhammad Kumail Haider), Jan., 305

Hardness

Effect of Surface Roughness and Hardness of Continuum Materials on Interface Shear Strength of Granular Materials (H. M. Abuel-Naga, H. A. Shaia, and A. Bouazza), Mar., 826

Hardness interconversion

Exact Analytical Durometer Hardness Scale Interconversion (P. H. Gilbert and A. J. Giacomin), Sep., 1995

Harmonic distortion

Performance Evaluation of PV-Supported STATCOM for Voltage and Frequency Regulation of Standalone SEIG System (K. Tamilselvan and R. Anita), Jan., 266

Hazardous substances

Assessment of Hazardous Substances in Electrical Cables: Implementation of RoHS Regulations in India (U. Rambabu, V. Balaram, R. Ratheesh, S. Chatterjee, M. Kishore Babu, and N. R. Munirathnam), Sep., 1930

Headcutting

Evaluation of Soil Saver Walls on Aquatic Organism Passage Through Box Culverts (Madan Neupane, Robert L. Parsons, Jie Han, David A. Parr, and James A. Jacobe), Jul., 1313

Health status

Approbation of the Ruffier Test Model Adapted for Children (Ihor Zanevskyy and Lyudmyla Zanevska), May, 872

Heart rate

Approbation of the Ruffier Test Model Adapted for Children (Ihor Zanevskyy and Lyudmyla Zanevska), May, 872

Heart rate variability

Physiological Information for Pavement Ride Quality Verification (K. Tomiyama and A. Kawamura), Jan., 227

Heat conduction

Determination of the Thermal Conductivity Tensor of Thermally Orthotropic Materials with Transient Line Heat Source Method (Bao Chen, Yiyi Huang, Kang Zhang, and Yujun Cui), Sep., 2033

Heat loss

Validation of a Clothing Heat Transfer Model in Nonisothermal Test Conditions (Meredith McQuerry), Jan., 1

Heat of combustion

Accuracy of Heat-Release Rate Measured in Microscale Combustion Calorimetry (H. Guo, R. E. Lyon, and N. Safronava), May, 1090

Heat transfer

Validation of a Clothing Heat Transfer Model in Nonisothermal Test Conditions (Meredith McQuerry), Jan., 1

Helical gears

Kinematic Errors on a C-Type Gear with a Parabolic Surface (Hsueh-Cheng Yang and Ching-Sheng Chang), Nov., 2557

High temperature mechanical testing rig

Development of High Temperature Mechanical Rig for Characterizing the Viscoplastic Properties of Alloys Used in Solid Oxide Cells (Tesfaye Tadesse Molla, Fabio Greco, Kawai Kwok, Philipp Zielke, and Henrik Lund Frandsen), Sep., 1918

High voltage gain

Performance Evaluation of Standalone Photovoltaic System with Isolated Dual-Inductor dc-dc Converter for Water-Pumping Application (M. Mohammadha Hussaini and A. Josephine Amala), May, 1122

High-dimensional

Principal Component Analysis Based on Marginal Density Ratios (W. Shi and J. Jiang), May, 1168

High-dynamic-range

Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images (Jack L. Glover, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1462

High-performance concrete

Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete (Behzad Hatami, Amir Mohammad Ramezanianpour, and Amir Saedi Daryan), Jan., 141

High-speed railway

Model Test of the Long-Term Behavior of a Pile-Net Structure Subgrade for High-Speed Railways (Xilin Lü, Quan Ma, Linlong Mu, and Hang Fang), Nov., 2311

High-strain-rate testing

Mini Round-Robin Test on the Split Hopkinson Pressure Bar (M. A. Kariem, D. Ruan, J. H. Beynon, and D. A. Prabowo), Mar., 457

High-strength concrete

Derivation of Complete Stress-Strain Curve for SSTT-Confined High-Strength Concrete in Compression (H.-P. Lee, A. Z. Awang, W. Omar, and P. L. Y. Tiong), Jan., 168 Shear Transfer in Normal- and High-Strength Recycled Aggregate Concrete (S. A. Waseem and B. Singh), Jan., 178

Hollow tine

Comparison of Cultivation Methods Impact on Playability of *Agrostis stolonifera* Greens (K. Dickson, J. Sorochan, G. Munshaw, and A. Thoms), May, 1256

Homeland security

The Case for Technical Performance Standards for Radiation Inspection Systems (Larry Hudson), Jan., 8

Honeycombed-core module

Experimental Study on Mechanical Property of Honeycombed-Core Girderless Floor with Four Edges Simply Supported (W. Yang, P. Jiang, and B. Han), Mar., 485

Hot treatment

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Human peeling

Seal Strength Evaluation of Flexible Plastic Films by Machine Testing and Human Peeling (Somporn Nilmanee, Tunyarut Jinkarn, Lerpong Jarupan, Supachai Pisuchpen, and Alaster Yoxall), Jul., 1508

Hybrid clustering

Enhanced Artificial Bee Colony Algorithm for Liver Cancer Analysis (K. Lokanayaki and A. Malathi), May, 851

Hydraulic conductivity

An Experimental Study on Cement-Solidified Cd-Contaminated Soils under Drying-Wetting Cycles (Huikai Liu, Haijun Lu, Xiong Zhang, Jixiang Li, and Weiwei Wang), Mar., 493

Hydrofracturing

Modeling of Permeation and Fracturing Grouting in Sand: Laboratory Investigations (Wen-Chieh Cheng, James C. Ni, Jack S. Shen, and Zhi-Feng Wang), Sep., 2067

Hyperelastic Ogden model

Development of an Equibiaxial Tensile Test Device and Associated Test Method for Parameter Identification of Hyperelastic Ogden Model of Soft Material (Jonas A. Pramudita, Harutaka Kubota, Yuji Tanabe, Masato Ito, and Ryoji Watanabe), Jan., 77

Hypothesis testing

Testing Behavior of the Mean Inactivity Time (M. Kayid and S. Izadkhah), Nov., 2649

]

Illumination refinement

DNT-Based Image Illumination Refinement System with Concurrent Copyright Embedding (Jung-San Lee and Yi-Hua Wang), Sep., 2151

Image archive

DNT-Based Image Illumination Refinement System with Concurrent Copyright Embedding (Jung-San Lee and Yi-Hua Wang), Sep., 2151

Image enhancement

Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images (Jack L. Glover, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1462

Image method

Experimental Study on Impact Crushing of Granite Particles (Jian-hong Yang, Qi Chen, Jian-hua Zhou, and Huai-ying Fang), Nov., 2376

Image processing

Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique (Surya Pratap Singh and Krishna Prapoorna Biligiri), Nov., 2440

Textural and Geometrical Features Based Approach for Identification of Individuals Using Palmprint and Hand Shape Images from Multiple Multimodal Datasets (Anum Shaukat, Saima Farhan, Muhammad Abuzar Fahiem, Huma Tauseef, Fahima Tahir, and Ghousia Usman), Nov., 2281

Image quality

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

Image segmentation

Evaluating Various Lung Cancer Nodule Detection Techniques—A Comparative Study (G. Usman, M. A. Fahiem, S. Farhan, and H. Tauseef), Mar., 798

Image-Pro Plus (IPP) software

Evaluation of Nano-ZnO Dispersed State in Bitumen with Digital Imaging Processing Techniques (R. Li, Y. Dai, P. Wang, C. Sun, J. Zhang, and J. Pei), May, 974

Imaging metrology

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

Imaging modalities

Evaluating Various Lung Cancer Nodule Detection Techniques—A Comparative Study (G. Usman, M. A. Fahiem, S. Farhan, and H. Tauseef), Mar., 798

Immobilization

Production of *Garcinia gummi-gutta* Methyl Ester (GGME) as a Potential Alternative Feedstock

for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics (Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac JoshuaRamesh Lalvani), Nov., 2661

Impact

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Effect of Impact Energy in the Esso Test—Part 1: Basic Experiments and Validation of FEM Analysis (Tomoya Kawabata, Masahito Kaneko, and Shuji Aihara), Sep., 2203

Impact behavior

Impact Properties of Multi-Wall Carbon Nanotubes Modified Composites (Y. Yuan, X. Yao, Y. Ma, and B. Liu), May, 1261

Impact crushing

Experimental Study on Impact Crushing of Granite Particles (Jian-hong Yang, Qi Chen, Jian-hua Zhou, and Huai-ying Fang), Nov., 2376

Impact energy

Effect of Impact Energy in ESSO Test (Part 2: Proposal of Validity Criteria of Impact Condition in ESSO Test by FEM Crack Propagation Analysis (Masahito Kaneko, Tomoya Kawabata, and Shuji Aihara), Sep., 1782

Impact properties

Experimental Study on the Impact Properties of Concrete Bridge Pier Reinforced with Stainless Steel Rebar (Guoxue Zhang, Ziqing Chen, Juan Lu, Shixiang Xu, and Xiwu Zhou), Jul., 1650

Impact resonance

Evaluation of Nondestructiveness of Resonant Column Testing for Characterization of Asphalt Concrete Properties (P. Tavassoti-Kheiry, I. Boz, M. Solaimanian, and T. Qiu), Mar., 631

Impact strength

Charpy Impact Test Methods for Cementitious Composites: Review and Commentary (Robert J. Thomas and Andrew D. Sorensen), Nov., 2422

In situ tests

Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements (Z.-H. Nie, T. Jiao, X. Wang, and T. Qiu), Jan., 428

Incinerator fly ash

The Study of UHPC Precast Concrete Containing Incinerator Fly Ash (Ming-Ju Lee, Ming-Gin Lee, Yu-Min Su, Yishuo Huang, and Wen-Chih Tung), Jan., 160

Increasing concave ordering

On the Properties of the UBAC(2) Class of Life Distributions (N. S. A. Ali), Mar., 730

Increasing mean inactivity time class

Testing Behavior of the Mean Inactivity Time (M. Kayid and S. Izadkhah), Nov., 2649

Independent component analysis

Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System (R. Velumani, M. Vijayakumar, and M. Ramasamy), Mar., 469

Indirect tensile

Micromechanical Simulation of Influence Factors of Indirect Tensile Test of Asphalt Mixture (W. Liu, Y. Gao, and L. Li), Mar., 832

Industrial applications

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Influence coefficient

A New Multicoefficients Creep Model for Concrete (Wenzhong Zheng and Can Tang), Jan., 199

Influential network relation map (INRM)

Who Is My Successor? Creating a Mentor-Protégé Selection and Evaluation Model Based on the Views of Mentors (C.-T. Lin and T.-T. Chang), May, 1158

Informal recycling

Assessment of Hazardous Substances in Electrical Cables: Implementation of RoHS Regulations in India (U. Rambabu, V. Balaram, R. Ratheesh, S. Chatterjee, M. Kishore Babu, and N. R. Munirathnam), Sep., 1930

Information energy

A Framework of Applying Ordering Coefficient Based on the Information Energy to Identify the Causal Relationships among Critical Factors from Raw Data (J.-I. Shieh and H.-H. Wu), Mar., 704

Injection molding

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Injury modeling

Blast Performance of Demining Footwear: Numerical and Experimental Trials on Frangible Leg Model and Injury Modeling (M. Karahan, E. A. Karahan, and N. Karahan), Mar., 666

Inspection

A Strategy for Inspection of Cracks in a Thick Structure Using an ECT Probe (M. Wu, D. Zhang, Z. Chen, and Y. Li), May, 1250

Instrumented

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Intensity of soil arching

Soil Arching Effect Analysis via a Modified Finite Element Model Based on a Field Test (Xiangdong Li, Yu Miao, and Ke Cheng), Sep., 2218

Interconnects

Development of High Temperature Mechanical Rig for Characterizing the Viscoplastic Properties of Alloys Used in Solid Oxide Cells (Tesfaye Tadesse Molla, Fabio Greco, Kawai Kwok, Philipp Zielke, and Henrik Lund Frandsen), Sep., 1918

Interface shear strength

Effect of Surface Roughness and Hardness of Continuum Materials on Interface Shear Strength of Granular Materials (H. M. Abuel-Naga, H. A. Shaia, and A. Bouazza), Mar., 826

Interface shear stress

Flexible Pavement Interface Bonding: Theoretical Analysis and Shear-Strength Measurement (H. Wang, G. Xu, Z. Wang, and T. Bennert), Jan., 99

Interfacial reaction

Effect of Aluminum Content on Interfacial Reaction of Directionally Solidified TiAl Alloys (C. Cheng, Y. Sui, K. Feng, J. Qi, Y. He, Q. Meng, F. Wei, and Z. Sun), Mar., 764

Internal standard method

Rietveld Quantitative Stability of Portland Blast Furnace Slag Cement Between Internal and External Standard Methods (P. Zhao, X. Liu, L. Lu, and P. Wang), Jan., 191

Internal structure

Effects of Internal Structure on Anisotropic Creep Behavior of Asphalt Mixture Based on User-Defined Three-Dimensional Discrete Element Method (Deyu Zhang, Tao Ma, Xunhao Ding, Weiguang Zhang, and Xiaoming Huang), Jul., 1355

International roughness index (IRI)

Physiological Information for Pavement Ride Quality Verification (K. Tomiyama and A. Kawamura), Jan., 227

Irganox 1010

Investigation on Thermo-Oxidative Aging Properties of Asphalt Binder with Hindered Phenolic Antioxidant (W. Wu, L. Li, J. Yu, S. Xu, C. Zhang, and L. Xue), Mar., 624

Iron nanoparticle

Research on Nitrate Removal by Graphene Loaded With Iron Nanoparticles for Groundwater Remediation (Y. Wang, S. Yang, C. Gao, B. Li, and G. Ji), Mar., 435

Iron oxide

Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids (B. Anil Kumar Naik and A. V. Vinod), Mar., 445

ISC

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

ISO 8608

Simulated Road Profiles According to ISO 8608 in Vibration Analysis (P. Múčka), Jan., 405

Isolation

Seismic Isolation Characteristics of a Friction System (Biao Wei, Peng Wang, Xuhui He, and Lizhong Jiang), Jul., 1411

J

Joints

A Test Protocol for Evaluating Absorption of Joints in Concrete Pavements (M. Tiznobaik and M. T. Bassuoni), Jul., 1636

Jominy end-quench testing machine

Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability Evaluation of AISI-8620 Case-Hardening Steel (Muhammad Aqib Hassan, Muhammad Mehdi, Muhammad Owais, Muhammad Nasir, and Syed Muhammad Kumail Haider), Jan., 305

K

Kernel principal component analysis

Iterative Kernel Principal Component for Large-Scale Data Set (Weiya Shi), Sep., 2130

Kinetic reaction mechanism

Research on Nitrate Removal by Graphene Loaded With Iron Nanoparticles for Groundwater Remediation (Y. Wang, S. Yang, C. Gao, B. Li, and G. Ji), Mar., 435

Knowledge extraction

Decision Support System for Management Decision in High-Risk Business Environment (Ming-Fu Hsu and Chung-I Huang), Sep., 2240

Knowledge management

Exploring the Links between Task-Level Knowledge Management and Project Success (L.-R. Yang, J.-H. Chen, and C.-H. Lee), May, 1220

Kriging

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

L

Laboratory testing

Standard Testing of Glass Revisited - Experimental and Theoretical Aspects (David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica), Sep., 1819

Landscape

Linking Ecology and Service Function in Scenic Road Landscape Planning: A Spatial Analysis Approach (Xiaochun Qin, Shengnan Cui, and Shu Liu), Jul., 1297

Large-scale data sets

Iterative Kernel Principal Component for Large-Scale Data Set (Weiya Shi), Sep., 2130

Laser

Development and Application of the New Explosive Loading Experimental System of Digital Laser Dynamic Caustics (Y. Wang), Mar., 680

Laser scanning

Assessment of Stress-Strain Behavior of Corroded Steel Reinforcement Using Digital Image Correlation (DIC) (Ranjitha Rajagopal, Sameer Sharma, Radhakrishna G. Pillai, and Sankara J. Subramanian), Sep., 1874

Laser weld

Evaluation of Fracture Tearing Resistance of Dissimilar Metal Welds in Laser Welded Thin Steel Sheets (L. Ambriško and L. Pešek), Mar., 842

Lateral resistance

Behavioral Characteristics of Group Batter Piles According to Pile Inclination and Action Direction under Statically Lateral Loads (Gi-Chun Kang and Jiseong Kim), Jul., 1591

Laterally loaded pile

Behavioral Characteristics of Group Batter Piles According to Pile Inclination and Action Direction under Statically Lateral Loads (Gi-Chun Kang and Jiseong Kim), Jul., 1591 Ultimate Lateral Resistance of Quadrangle Array Piles Using the Strain Wedge Model on Soil Subgrade (Jiseong Kim and Gi-Chun Kang), Nov., 2339

Leaching concentration

An Experimental Study on Cement-Solidified Cd-Contaminated Soils under Drying-Wetting Cycles (Huikai Liu, Haijun Lu, Xiong Zhang, Jixiang Li, and Weiwei Wang), Mar., 493

Leaching test

Evaluation of Asphalt Effect on Water Quality Using Leaching Test and Molecular Simulation (Jun Chen, Hao Wang, Jiantao Wu, and Guangji Xu), Sep., 2121

Lead

Assessment of Hazardous Substances in Electrical Cables: Implementation of RoHS Regulations in India (U. Rambabu, V. Balaram, R. Ratheesh, S. Chatterjee, M. Kishore Babu, and N. R. Munirathnam), Sep., 1930

Least energy consumption principle

Experimental Study on Dynamic Strength Improvement Mechanism of Concrete Materials (Dong Lei, Jintao He, Feipeng Zhu, and Pengxiang Bai), Jan., 151

Life distribution

Testing Behavior of the Mean Inactivity Time (M. Kayid and S. Izadkhah), Nov., 2649

Lifetime

Sequential Sampling Plan in the Truncated Life Test for Weibull Distribution (Hasan Rasay, Morteza Pourgharibshahi, and Mohammad Saber Fallahnezhad), Mar., 693

Liftoff value

Numerical Analysis of Magnetic Flux Leakage of Transverse Defects of Sucker Rod (Ou Zhang, Xueye Wei, and Shuxin Yan), Sep., 2265

Lime and fly-ash sintered red mud

Experimental Study on Lime and Fly Ash-Stabilized Sintered Red Mud in Road Base (Jiaming Zhang and Chang Li), Jul., 1539

Limit-bearing capacity

Evaluation of Bearing Capacity of Fly-Ash Highway Subgrade Based on Model Test (Wei Cui, Xiao Zheng, and Qian-qing Zhang), May, 943

Linear profiles

Evaluation of Two Process Yields in Acceptance Sampling Plans (K. A. Butt, M. Aslam, F.-K. Wang, H. Lee, and C.-H. Jun), Mar., 756

Liquefaction

Desaturation for Liquefaction Mitigation Using Biogas Produced by *Pseudomonas* stutzeri (Erxing Peng, Dingwen Zhang, Wenbo Sun, and Guangyin Du), Jul., 1333

Live cancer cell

Enhanced Artificial Bee Colony Algorithm for Liver Cancer Analysis (K. Lokanayaki and A. Malathi), May, 851

Load spectrum

Research on Load Spectrum Construction of Bench Test Based on Automotive Proving Ground (Xiaobing Yang, Xintian Liu, Jiachi Tong, Yansong Wang, and Xiaolan Wang), Jan., 244

Research on Load-Spectrum Construction of Automobile Key Parts Based on Monte Carlo Sampling (M.-L. Wang, X.-T. Liu, X.-L. Wang, and Y.-S. Wang), May, 1099

Load transmission route

Research on Load-Spectrum Construction of Automobile Key Parts Based on Monte Carlo Sampling (M.-L. Wang, X.-T. Liu, X.-L. Wang, and Y.-S. Wang), May, 1099

Load-bearing capacity

Field Evaluation of Load-Bearing Capacity of Tire Fill Embankment Pavements (Leila Hashemian and Alireza Bayat), Sep., 1901

Load-spectrum extrapolation

Research on Load-Spectrum Construction of Automobile Key Parts Based on Monte Carlo Sampling (M.-L. Wang, X.-T. Liu, X.-L. Wang, and Y.-S. Wang), May, 1099

Loading angle

Behavioral Characteristics of Group Batter Piles According to Pile Inclination and Action Direction under Statically Lateral Loads (Gi-Chun Kang and Jiseong Kim), Jul., 1591

Long-term settlement

Model Test of the Long-Term Behavior of a Pile-Net Structure Subgrade for High-Speed Railways (Xilin Lü, Quan Ma, Linlong Mu, and Hang Fang), Nov., 2311

Loss of temperature

Study of the Efficiency and Temperature Loss Caused by Degassing and Filtration of AlSi₉Cu₃ Alloy (C. Demian, D. Ferreño, E. Ruiz, and J. A. Casado), Mar., 772

Lossless video coding

A Comparative Evaluation Between CABAC and CAVLC (D. Ammous, F. Kammoun, and N. Masmoudi), May, 1111

Low impact development

Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties (Snehasish Mondal and Krishna Prapoorna Biligiri), May, 892

Low temperature

Fatigue Crack Growth Testing and Evaluation for Aluminum Alloys at Temperatures of 25° C and -70° C (M. D. Liu and J. J. Xiong), Jul., 1698

Low temperature property

Low Temperature Properties of Waste Edible Vegetable Oil Rejuvenated Asphalt Binder with Recycled Tire Rubber (D. Zhang, M. Chen, S. Wu, J. Zheng, and Y. Sang), Mar., 602

Low viscosity

An Improved Method for Calculating Viscosity Index (VI) of Low Viscosity Base Oils (M. J. Covitch), Mar., 820

Low-temperature tensile tester

Cohesive Property Evaluation of Crack Sealants Using a Low-Temperature Tensile Tester (Hengxiao Xue, Liping Cao, Xiangchen Hou, and Yiqiu Tan), Sep., 1983

Lung cancer

Evaluating Various Lung Cancer Nodule Detection Techniques—A Comparative Study (G. Usman, M. A. Fahiem, S. Farhan, and H. Tauseef), Mar., 798

M

M-K model

Theoretical Prediction of Forming Limit Diagrams for B1500HS Steel at Elevated Temperature Based on Modified Arrhenius and M–K Models (Hongli Hou, Huiping Li, and Lianfang He), Jul., 1684

Machinability

Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron (Ş. Yazman, L. Gemi, M. Uludağ, A. Akdemir, M. Uyaner, and D. Dişpinar), May, 1012

Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy (Muhammet Uludağ, Şakir Yazman, Lokman Gemi, Barış Bakircioğlu, Eray Erzi, and Derya Dispinar), Nov., 2592

Machine vision

Depth-from-Focus-Based 3D Reconstruction of Asphalt Pavement Micro-Texture (X. Cui, X. Zhou, J. Lou, J. Zhang, and M. Ran), Jan., 419

Machining

Effects of Process Parameters on the Surface Roughness of Stainless Steel 316L Parts Produced by Selective Laser Melting (Derahman Nur Aqilah, Ab Karim Mohd Sayuti, Yusof Farazila, Dambatta Yusuf Suleiman, Mohd Amran Nor Amirah, and Wan Badiuzaman Wan Nur Izzati), Jul., 1673

Magnetic flux leakage

Numerical Analysis of Magnetic Flux Leakage of Transverse Defects of Sucker Rod (Ou Zhang, Xueye Wei, and Shuxin Yan), Sep., 2265

Magnetic methods

Numerical Analysis of Magnetic Flux Leakage of Transverse Defects of Sucker Rod (Ou Zhang, Xueye Wei, and Shuxin Yan), Sep., 2265

Marching Cubes

MRI Images Segmentation and 3D Reconstruction for Cerebral Cancer Detection (Nadia Smaoui Zghal and Nabil Derbel), Nov., 2707

Marginal density ratio

Principal Component Analysis Based on Marginal Density Ratios (W. Shi and J. Jiang), May, 1168

Market segments

An Evaluation of Vacation Lifestyle Scale—Using International and Theme Resort Hotels in Taiwan as Examples (S.-Y. Lin, P.-J. Juan, and T.-Y. Hsu), Jan., 331

Market value added

Relationship among Market Value Added, Cash Value Added, and Corporate Governance: A Case of Taiwan during 2011– 2012 (Mao-Chang Wang), Nov., 2641

Marketing strategy

Using the DEMATEL Method to Explore the Critical Factors That Influence Visitors to Purchase Museum Cultural Products (Chin-Tsai Lin, Chuan Lee, Sih-Wun Wang, and Yi-Hsueh Chen), Sep., 2045

Mass loss rate

Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles (WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and DaFu Cao), Nov., 2330

Material characterization

Postweld Heat Treatment Characterization of Mild Steel (E6013) Welded Areas Using Wavelet Transform of Ultrasonic Testing Signals (Tariq M. R. Khan, Amna Maqsood, Saad A. Warraich, and Saeed Khalid), Sep., 2274

Material testing

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Mathematical modeling

Approbation of the Ruffier Test Model Adapted for Children (Ihor Zanevskyy and Lyudmyla Zanevska), May, 872

Matrix analytic method

Optimization Analysis of Retrial Machine Repair Problem with Server Breakdown and Threshold Recovery Policy (Kuo-Hsiung Wang, Tseng-Chang Yen, and Jia-Yu Chen), Nov., 2630

Maturity method

Relationship between Computed Rate Constants and the Variability in Maturity-Based Strength Predictions (Chang Hoon Lee and Kenneth C. Hover), Jul., 1715

Maximum energy event temperature

Nondestructive Acoustic Emission Test to Evaluate Thermal Damage in Asphalt Concrete Materials (Behzad Behnia, William G. Buttlar, and Henrique Reis), Jan., 118

Maximum likelihood estimation

A New Class of Beta-Complementary Exponential Power Series Distributions (E. Mahmoudi, R. S. Meshkat, and M. Entezari), Sep., 2171

Maximum likelihood estimator

Estimation of the Stress Strength Parameter for the Generalized Exponential-Poisson Distribution (S. Nadarajah, S. F. Bagheri, M. Alizadeh, and E. Bahrami Samani), Sep., 2184

Maximum likelihood method

A New Application of Beta Gompertz Distribution in Reliability (M. KH. Hassan), Mar., 736

Maximum power point tracking

PV Module Integrated Dual Boost Isolated dc-dc Converter Fed Three-Phase Micro-Inverter (P. Geetha and S. Ravi), May, 1145

Mechanical characterization

Mechanical Characterization of Granite Rock Materials: On the Influence from Pre-Existing Defects (D. Jelagin, M. Saadati, I. Jerjen, and P.-L. Larsson), Mar., 540

Mechanical properties

Compressive Behavior of Cement Asphalt Mortar Under Low Confinement (X. Wu and J.-F. Wang), Jan., 108

Experimental Study on Mechanical Property of Honeycombed-Core Girderless Floor with Four Edges Simply Supported (W. Yang, P. Jiang, and B. Han), Mar., 485

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy (Muhammet Uludağ, Şakir Yazman, Lokman Gemi, Barış Bakircioğlu, Eray Erzi, and Derya Dispinar), Nov., 2592

Mechanical testing

Experimental Study on Lime and Fly Ash–Stabilized Sintered Red Mud in Road Base (Jiaming Zhang and Chang Li), Jul., 1539 Effect of Silver Addition on Mechanical Properties and Stress Corrosion Cracking in a Predeformed and Overaged 7055 Aluminum Alloy (Mehdi Shakouri, Mohammad Esmailian, and Saeed Shabestari), Sep., 1891

Mechanistic-empirical pavement analysis Flexible Pavement Interface Bonding: Theoretical Analysis and Shear-Strength Measurement (H. Wang, G. Xu, Z. Wang, and T. Bennert), Jan., 99

Medical tourism supply chain

A Sustainability Strategy Assessment Framework Model for Medical Tourism Supply Chain in Asia (K.-C. Chung and L.-C. Chang), Mar., 745

Melt quality

Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy (Muhammet Uludağ, Şakir Yazman, Lokman Gemi, Barış Bakircioğlu, Eray Erzi, and Derya Dispinar), Nov., 2592

Mentor-protégé selection

Who Is My Successor? Creating a Mentor–Protégé Selection and Evaluation Model Based on the Views of Mentors (C.-T. Lin and T.-T. Chang), May, 1158

Mesostructure

Evaluating the Mesostructural Changes of Laboratory Created Soil-Rock Mixtures Using a Seepage Test Based on NMR Technology (Shangxin Feng, Junrui Chai, Zengguang Xu, and Yuan Qin), May, 879

Metal detectors

Bayesian Estimates and the Effectiveness of Metal Detection Devices (Paul B. Kantor), Jan., 365

Metallic foam

NDT of Cavity Defect in Metallic Plate Using dc Potential Drop Method (Xiaojuan Wang, Wenlu Cai, and Zhenmao Chen), Mar., 641

Metallic impurities

Determination of Trace Elements in High Purity Silver Granules Using Sector Field Inductively Coupled Plasma Mass Spectrometry (S. Swarupa Tripathy, Rajiv K. Swati, Saxena, and Nahar Singh), Jul., 1489

Metallography

Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability Evaluation of AISI-8620 Case-Hardening Steel (Muhammad Aqib Hassan, Muhammad Mehdi, Muhammad Owais, Muhammad Nasir, and Syed Muhammad Kumail Haider), Jan., 305

Microbial activity

Guidance for Investigating Calcite Precipitation by Urea Hydrolysis for Geomaterials (B. S. Shashank, James M. Minto, Devendra Narain Singh, Gráinne El Mountassir, and Charles W. Knapp), Jul., 1527

Microcontroller

Tele Alert System for Epileptic Seizure on a Study of EEG Signal Classification by GBE-NLSVM through ICA Preprocessed and AR Extracted Signal in a BCI System (R. Velumani, M. Vijayakumar, and M. Ramasamy), Mar., 469

Microcrack growth behavior

Microcrack Growth Behavior and CWFS Criterion Parameters Optimization of Granite with PFC (Shengjun Miao, Hui Wang, Xuelian Guo, Mingchun Liang, and Changqing Kong), Nov., 2412

Microbial-induced carbonate precipitation (MICP)

Nature-Inspired Bridge Scour Countermeasures: Streamlining and Biocementation (Junliang Tao, Junhong Li, Xiangrong Wang, and Ruotian Bao), Jul., 1376

Micromechanical model

Effects of Internal Structure on Anisotropic Creep Behavior of Asphalt Mixture Based on User-Defined Three-Dimensional Discrete Element Method (Deyu Zhang, Tao Ma, Xunhao Ding, Weiguang Zhang, and Xiaoming Huang), Jul., 1355

Micrometersized graphene

Research on Nitrate Removal by Graphene Loaded With Iron Nanoparticles for Groundwater Remediation (Y. Wang, S. Yang, C. Gao, B. Li, and G. Ji), Mar., 435

Micropile

Experimental Study of Micropile Lateral Resistance Effectiveness (Y. Du, M. Bai, Y. Chen, X. Wang, and Z. Li), Mar., 523

MicroRNA

Analytical Performance Test of Pancreas Cancer miRNA Chip (C.-H. Lee, J. Lee, J. Lee, J. Heo, and M. S. Noh), May, 865

Microscale combustion calorimeter

Accuracy of Heat-Release Rate Measured in Microscale Combustion Calorimetry (H. Guo, R. E. Lyon, and N. Safronava), May, 1090

Microstructure

A Test Protocol for Evaluating Absorption of Joints in Concrete Pavements (M. Tiznobaik and M. T. Bassuoni), Jul., 1636

Correlation of Deformation Strain with the Tensile Properties and Fracture Mode of the AA 2014 Alloy Using Simulations and Experiments (T. R. Prabhu), May, 999

Experiments (T. R. Prabhu), May, 999
Design and Fabrication of Jominy End-Quench Testing Machine: Hardenability
Evaluation of AISI-8620 Case-Hardening
Steel (Muhammad Aqib Hassan, Muhammad Mehdi, Muhammad Owais, Muhammad Nasir, and Syed Muhammad Kumail
Haider), Jan., 305

Prediction of Mechanical Performance of Cemented Paste Backfill by the Electrical Resistivity Measurement (Wenbin Xu, Xichun Tian, and Changbing Wan), Nov., 2450

Study of the Efficiency and Temperature Loss Caused by Degassing and Filtration of AlSi₉Cu₃ Alloy (C. Demian, D. Ferreño, E. Ruiz, and J. A. Casado), Mar., 772

Microsurfacing

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Micro-texture

Depth-from-Focus-Based 3D Reconstruction of Asphalt Pavement Micro-Texture (X. Cui, X. Zhou, J. Lou, J. Zhang, and M. Ran), Jan., 419

Microtomography

Creep Fatigue Interaction under Different Test Variables: Mechanics and Mechanisms (Kaustav Barat, S. Sivaprasad, S. Kar, and S. Tarafder), Nov., 2521

Migration coefficient

Resistivity, Penetrability and Porosity of Concrete: A Tripartite Relationship (A. Bediwy and M. T. Bassuoni), Mar., 549

Mild steel

Application of Nonlinear Ultrasonic Technique to Characterize the Damage Evolution in Structural Steel after Tensile Deformation (Xiao Wang, Xue Wang, Lei Hu, Cheng-chao Du, and Yong Li), Jan., 385

Minerals

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Mixed mode

Effect of Tensile or Compressive Overload on the Fatigue Crack Growth of Friction Stir Welded 19501 Aluminum Alloy (Prakash Chandra Gope, Harshit Kumar, and Himanshu Purohit), Jan., 394

Mixed Poisson distributions

A New Mixed Poisson Distribution: Modeling and Applications (Mina Habibi and Akbar Asgharzadeh), Jul., 1728

Mixed-mode load

Strength of Aluminum Alloys Under Static Mixed-Mode I/II Loading Conditions (F. Tariq, M. Khan, M. Farhan, and M. Z. Siddiqui), Jan., 294

Mixture design

Experimental Study on Lime and Fly Ash-Stabilized Sintered Red Mud in Road Base (Jiaming Zhang and Chang Li), Jul., 1539

Mixture distribution model

Research on Load Spectrum Construction of Bench Test Based on Automotive Proving Ground (Xiaobing Yang, Xintian Liu, Jiachi Tong, Yansong Wang, and Xiaolan Wang), Jan., 244

Mixtures

Nanosized Morphology and Mechanical Properties of Recovered Binders from Weathered Asphalt Mixtures (Yan Liu, Junan Shen, Pengcheng Shi, Hong Zhu, and Qiju Gao), Nov., 2498

Modality classification

Studying the Statistics of Natural X-ray Pictures (Praful Gupta, Jack L. Glover, Nicholas G. Jr., and BovikAlan C. Paulter), Jul., 1478

Model test

Evaluation of Bearing Capacity of Fly-Ash Highway Subgrade Based on Model Test (Wei Cui, Xiao Zheng, and Qian-qing Zhang), May, 943

Model Test of the Long-Term Behavior of a Pile-Net Structure Subgrade for High-Speed Railways (Xilin Lü, Quan Ma, Linlong Mu, and Hang Fang), Nov., 2311

Modeling

Investigation and Modeling of Sound Absorption Properties of Thin Layer Wearing Course (Mingliang Li, Bin Xu, Dongwei Cao, Yongjun Fan, and Shujiang Ping), Jan., 46

Standard Testing of Glass Revisited - Experimental and Theoretical Aspects (David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica), Sep., 1819

Modification

Experimental Study in the Modification of Mortar Samples with Incorporated Rice Husk (Jiesheng Liu, Faping Li, Xiang He, Xiaofan Liu, and Rongtang Zhang), May, 967

Modification mechanism

Modification Mechanism and Performance of Qingchuan Rock Asphalt–Modified Asphalt (Limin Li, Zhaoyi He, Weidong Liu, Jianqing Jiang, and Cheng Hu), Jul., 1610

Modified asphalt

Rutting Evaluation of Alaskan Asphalt Pavement Containing Sustainable Materials (Sheng Zhao and Jenny Liu), Jul., 1366

Modulus of rupture

Standard Testing of Glass Revisited - Experimental and Theoretical Aspects (David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica), Sep., 1819

Moisture

Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation (Sampat Kedarisetty, Gourab Saha, Krishna Prapoorna Biligiri, and Jorge B. Sousa), Nov., 2511

Moisture sensitivity

Assessing Moisture Sensitivity of Rubberized Warm Mix Asphalt Mixtures Using the

Surface Free Energy Method and Dynamic Water Pressure Tester (Jiangmiao Yu, Chunlong Xiong, Xiaoning Zhang, Zhesheng Ge, and Guanfeng An), Mar., 580

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Moisture susceptibility

An Innovative Method for Interpretation of Asphalt Boil Test (Akhtarhusein A. Tayebali, Abhilash Kusam, and Christopher Bacchi), Jul., 1622

Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications (M. Hasanuzzaman, L. Hashemian, and A. Bayat), Jan., 88

Molecular simulation

Evaluation of Asphalt Effect on Water Quality Using Leaching Test and Molecular Simulation (Jun Chen, Hao Wang, Jiantao Wu, and Guangji Xu), Sep., 2121

Moments

A New Class of Beta-Complementary Exponential Power Series Distributions (E. Mahmoudi, R. S. Meshkat, and M. Entezari), Sep., 2171

A New Mixed Poisson Distribution: Modeling and Applications (Mina Habibi and Akbar Asgharzadeh), Jul., 1728

Monte Carlo sampling

Research on Load-Spectrum Construction of Automobile Key Parts Based on Monte Carlo Sampling (M.-L. Wang, X.-T. Liu, X.-L. Wang, and Y.-S. Wang), May, 1099

Monte Carlo simulation

A New Class of Beta-Complementary Exponential Power Series Distributions (E. Mahmoudi, R. S. Meshkat, and M. Entezari), Sep., 2171

Mortar

Charpy Impact Test Methods for Cementitious Composites: Review and Commentary (Robert J. Thomas and Andrew D. Sorensen), Nov., 2422

Experimental Study in the Modification of Mortar Samples with Incorporated Rice Husk (Jiesheng Liu, Faping Li, Xiang He, Xiaofan Liu, and Rongtang Zhang), May, 967

Multiaxial fatigue

Development of Accelerated Durability Tests for Rear Suspension Components under Failure-Correlated Load (Li-Hui Zhao, Jia-Wei Yu, Tie Chen, Jun Li, and Song-Lin Zheng), Sep., 1862

Multiaxial stress/strain state

Development of Accelerated Durability Tests for Rear Suspension Components under Failure-Correlated Load (Li-Hui Zhao, Jia-Wei Yu, Tie Chen, Jun Li, and Song-Lin Zheng), Sep., 1862

Multi-criteria decision-making

Evaluating the Best Outsourcing Service Country in the Southeast Asian Region: A Fuzzy-AHP Approach (Van Kien Pham, Anh Tho Truong Hoang, and Ha Le Thi Thanh), Sep., 2227

Multifractal

Evaluation of Segregation in Asphalt Pavement Surface Using Concave Multifractal Distribution (Mao-ping Ran, Shenqing Xiao, Xing-lin Zhou, and Wang-xin Xiao), Sep., 2100

Multi-hazard

Review of Design, Construction, and Capabilities of an Air Bladder Load Test Facility (ABLTF) at BCERL for Structural Experimental Enclosure Studies (Ali M. Memari, Thomas Kuczynski, and Ryan L. Solnosky), Jul., 1421

Multi-objective genetic algorithm

Multi-Objective Genetic Algorithm for Economic Statistical Design of the T^2 Control Chart with Variable Sample Size: The Updated Markov Chain Approach (Asghar Seif), May, 1209

Multiple lines

Production Yield for Multiple Line Processes: Product Acceptance Determination (W. L. Pearn, Y. T. Tai, and Y. T. Chiu), Jan., 340

Multispectral analysis

Nondestructive Evaluation of Solid Pharmaceutical Products Using Wavelet Transformations and Multispectral Data (Fahima Tahir, Muhammad Abuzar Fahiem, Saima Farhan, and Huma Tauseef), Jul., 1399

N

Nanoclay

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Nanofluid

Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids (B. Anil Kumar Naik and A. V. Vinod), Mar., 445

Nanomechanical properties

Nanosized Morphology and Mechanical Properties of Recovered Binders from Weathered Asphalt Mixtures (Yan Liu, Junan Shen, Pengcheng Shi, Hong Zhu, and Qiju Gao), Nov., 2498

Nanomorphology

Nanosized Morphology and Mechanical Properties of Recovered Binders from Weathered Asphalt Mixtures (Yan Liu, Junan Shen, Pengcheng Shi, Hong Zhu, and Qiju Gao), Nov., 2498

Nanosilica

Laboratory Investigation of Microsurfacing Asphalt Modified with Nanosilica and Nanoclay Combined with Polyethylene Fibers (Ameneh Otadi and Javad Tanzadeh), Jul., 1321

Nanotechnology

Production of *Garcinia gummi-gutta* Methyl Ester (GGME) as a Potential Alternative Feedstock

for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics (Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac JoshuaRamesh Lalvani), Nov., 2661

Nano-ZnO

Evaluation of Nano-ZnO Dispersed State in Bitumen with Digital Imaging Processing Techniques (R. Li, Y. Dai, P. Wang, C. Sun, J. Zhang, and J. Pei), May, 974

National Institute of Standards and Technology

Studying the Statistics of Natural X-ray Pictures (Praful Gupta, Jack L. Glover, Nicholas G. Jr., and BovikAlan C. Paulter), Jul., 1478

Natural defects

Locating Wood Defects Based on Vibration Modes (Y. Miao, M. Zhong, and Z. Liu), Mar., 534

Natural scene statistic

Studying the Statistics of Natural X-ray Pictures (Praful Gupta, Jack L. Glover, Nicholas G. Jr., and BovikAlan C. Paulter), Jul., 1478

Nitrate removal

Research on Nitrate Removal by Graphene Loaded With Iron Nanoparticles for Groundwater Remediation (Y. Wang, S. Yang, C. Gao, B. Li, and G. Ji), Mar., 435

Nitrogen doping

Photocatalytic Activity of N-Doped ${\rm TiO_2}$ to Vehicle Exhaust in Road Tunnel (T. Wang and T. Xu), May, 1076

Nodule detection

Evaluating Various Lung Cancer Nodule Detection Techniques—A Comparative Study (G. Usman, M. A. Fahiem, S. Farhan, and H. Tauseef), Mar., 798

Non-destructive evaluation

Non-Destructive Evaluation of the Bending-Fatigue Damage in Carbon-Fiber-Composite Laminates Based on Ultrasonic Wave Propagation (M. He and T. Yang), Mar., 647

Nondestructive testing

A Strategy to Determine Partial Discharge in XLPE Power Cables Using Acoustic Emission Detection Technique (D. F. Jingle Jabha, K. Selvi, and R. Joselin), Jan., 283 Comparison Between Destructive and Nondestructive Tests in the Evaluation of Abrasion Resistance of Concrete (A. Meza, J. A. Ortiz, L. Peralta, and C. Sánchez), May, 906 Evaluation of Nondestructiveness of Resonant Column Testing for Characterization of Asphalt Concrete Properties (P. Tavassoti-Kheiry, I. Boz, M. Solaimanian, and T. Qiu), Mar., 631

NDT of Cavity Defect in Metallic Plate Using dc Potential Drop Method (Xiaojuan Wang, Wenlu Cai, and Zhenmao Chen), Mar., 641 Variable Slip Ratio Rolling Contact Fatigue Tester (Marcellin Zahui, Satyam Deshmukh, and Subodh Subedi), May, 1042

Nonlinear amplification coefficient

A New Multicoefficients Creep Model for Concrete (Wenzhong Zheng and Can Tang), Jan., 199

Nonlinear ultrasonic technique

Application of Nonlinear Ultrasonic Technique to Characterize the Damage Evolution in Structural Steel after Tensile Deformation (Xiao Wang, Xue Wang, Lei Hu, Cheng-chao Du, and Yong Li), Jan., 385

Non-Newtonian

Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids (B. Anil Kumar Naik and A. V. Vinod), Mar., 445

Nonrecoverable creep compliance

Nonrecoverable Compliance and Recovery Behavior of Polymer-Modified and Reclaimed Asphalt Pavement (RAP)–Modified Binders in Arkansas (Mohammed Ziaur Rahaman, Zahid Hossain, and Musharraf Zaman), Nov., 2483

Normalized difference vegetative index

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

Nuclear magnetic resonance (NMR)

Evaluating the Mesostructural Changes of Laboratory Created Soil-Rock Mixtures Using a Seepage Test Based on NMR Technology (Shangxin Feng, Junrui Chai, Zengguang Xu, and Yuan Qin), May, 879

Nucleating agent

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Numerical simulation

A Strategy for Inspection of Cracks in a Thick Structure Using an ECT Probe (M. Wu, D. Zhang, Z. Chen, and Y. Li), May, 1250

Improvement of Measuring Accuracy for Coating Covered on Conical Steel Shells by Correction of Eddy Current Signals (Meixian Wu, Dongli Zhang, Zhenmao Chen, and Yong Li), Jan., 17

Investigation of Asphalt Track Behavior Under Cyclic Loading: Full-Scale Testing and Numerical Simulation (Seong-Hyeok Lee, Hai V. Vo, and Dae-Wook Park), May, 934

Mini Round-Robin Test on the Split Hopkinson Pressure Bar (M. A. Kariem, D. Ruan, J. H. Beynon, and D. A. Prabowo), Mar., 457

O

Objective metrics

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

One-sided specifications

Evaluation of Two Process Yields in Acceptance Sampling Plans (K. A. Butt, M. Aslam, F.-K. Wang, H. Lee, and C.-H. Jun), Mar., 756

On-site testing

Bayesian Estimates and the Effectiveness of Metal Detection Devices (Paul B. Kantor), Jan., 365

Optical fiber

An Optical Fiber Sensor Method for Simultaneously Monitoring Corrosion and Structural Strain Induced by Loading (Jianghong Mao, Fangyuan Xu, Weiliang Jin, Qian Gao, Yidong Xu, and Chen Xu), Jul., 1443

Optical measurement mechanics

Development and Application of the New Explosive Loading Experimental System of Digital Laser Dynamic Caustics (Y. Wang), Mar., 680

Optical properties

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Photocatalytic Activity of N-Doped ${\rm TiO_2}$ to Vehicle Exhaust in Road Tunnel (T. Wang and T. Xu), May, 1076

Optimal contents

Laboratory Performance Evaluation of Reinforced Basalt Fiber in Sealing Asphalt Chips (X. Gu, X. Zhang, J. Lv, Z. Huang, B. Yu, and X. Zou), May, 1269

Optimization

Concert and Analysis of Auto-Tuning Dual-Feedback Biological Harmonic Controller for Industrial Claims (P. M. Balasubramaniam and M. Srinivasan), May, 1136

Ordering coefficient

A Framework of Applying Ordering Coefficient Based on the Information Energy to Identify the Causal Relationships among Critical Factors from Raw Data (J.-I. Shieh and H.-H. Wu), Mar., 704

Origin of fracture

Standard Testing of Glass Revisited - Experimental and Theoretical Aspects (David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica), Sep., 1819

Outsourcing

Evaluating the Best Outsourcing Service Country in the Southeast Asian Region: A Fuzzy-AHP Approach (Van Kien Pham, Anh Tho Truong Hoang, and Ha Le Thi Thanh), Sep., 2227

Overlay tester

Assessing Crack Susceptibility of Asphalt Concrete Mixtures with Overlay Tester (Victor M. Garcia, Alejandro Miramontes, Jose Garibay, Imad Abdallah, and Soheil Nazarian), May, 924

Overload

Effect of Tensile or Compressive Overload on the Fatigue Crack Growth of Friction Stir Welded 19501 Aluminum Alloy (Prakash Chandra Gope, Harshit Kumar, and Himanshu Purohit), Jan., 394

Oxygen-consumption calorimetry

Accuracy of Heat-Release Rate Measured in Microscale Combustion Calorimetry (H. Guo, R. E. Lyon, and N. Safronava), May, 1090

P

Packaging

Seal Strength Evaluation of Flexible Plastic Films by Machine Testing and Human Peeling (Somporn Nilmanee, Tunyarut Jinkarn, Lerpong Jarupan, Supachai Pisuchpen, and Alaster Yoxall), Jul., 1508

Pancreatic cancer

Analytical Performance Test of Pancreas Cancer miRNA Chip (C.-H. Lee, J. Lee, J. Lee, J. Heo, and M. S. Noh), May, 865

Parabolic surface

Kinematic Errors on a C-Type Gear with a Parabolic Surface (Hsueh-Cheng Yang and Ching-Sheng Chang), Nov., 2557

Parameter identification

Development of an Equibiaxial Tensile Test Device and Associated Test Method for Parameter Identification of Hyperelastic Ogden Model of Soft Material (Jonas A. Pramudita, Harutaka Kubota, Yuji Tanabe, Masato Ito, and Ryoji Watanabe), Jan., 77

Particle Flow Code 2-Dimensional

Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique (Surya Pratap Singh and Krishna Prapoorna Biligiri), Nov., 2440

Passive confinement

A Novel Triaxial Test System for Concrete under Passive Confinement (Jiafei Jiang, Pingcheng Xiao, and Benben Li), May, 913

Patching

Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications (M. Hasanuzzaman, L. Hashemian, and A. Bayat), Jan., 88

Pattern of corrosion

Assessment of Stress-Strain Behavior of Corroded Steel Reinforcement Using Digital Image Correlation (DIC) (Ranjitha Rajagopal, Sameer Sharma, Radhakrishna G. Pillai, and Sankara J. Subramanian), Sep., 1874

Pattern recognition

Textural and Geometrical Features Based Approach for Identification of Individuals Using Palmprint and Hand Shape Images from Multiple Multimodal Datasets (Anum Shaukat, Saima Farhan, Muhammad Abuzar Fahiem, Huma Tauseef, Fahima Tahir, and Ghousia Usman), Nov., 2281

Pavements

Early Age Thermal Measurements of Soil-Cement Mixtures for Quality Control during Paving (W. Griffin Sullivan, Isaac L. Howard, Tim Cost, and Jay Shannon), Sep., 1957

Paving

Early Age Thermal Measurements of Soil-Cement Mixtures for Quality Control during Paving (W. Griffin Sullivan, Isaac L. Howard, Tim Cost, and Jay Shannon), Sep., 1957

Peaks-Over-Threshold extrapolation

Research on Load Spectrum Construction of Bench Test Based on Automotive Proving Ground (Xiaobing Yang, Xintian Liu, Jiachi Tong, Yansong Wang, and Xiaolan Wang), Jan., 244

Pendulum

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Penetration resistance

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

Percent recovery

Nonrecoverable Compliance and Recovery Behavior of Polymer-Modified and Reclaimed Asphalt Pavement (RAP)–Modified Binders in Arkansas (Mohammed Ziaur Rahaman, Zahid Hossain, and Musharraf Zaman), Nov., 2483

Performance

Experimental Study on Lime and Fly Ash—Stabilized Sintered Red Mud in Road Base (Jiaming Zhang and Chang Li), Jul., 1539 Production of *Garcinia gummi-gutta* Methyl Ester (GGME) as a Potential Alternative Feedstock

for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics (Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac JoshuaRamesh Lalvani), Nov., 2661 Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation (Sampat Kedarisetty, Gourab Saha, Krishna Prapoorna Biligiri, and Jorge B. Sousa), Nov., 2511

Performance analysis

Energy and Exergy Efficiency of Flat Plate PVT Collector With Forced Convection (B. Srimanickam, M. M. Vijayalakshmi, and E. Natarajan), Mar., 783

Performance indexes

Assessing Crack Susceptibility of Asphalt Concrete Mixtures with Overlay Tester (Victor M. Garcia, Alejandro Miramontes, Jose Garibay, Imad Abdallah, and Soheil Nazarian), May, 924

Performance measurement

Relationship among Market Value Added, Cash Value Added, and Corporate Governance: A Case of Taiwan during 2011– 2012 (Mao-Chang Wang), Nov., 2641

Performance optimization

Optimization of Laboratory Preparation of the Emulsified Bioasphalt with Two Emulsifiers (Xi Chen, Hainian Wang, Qinghua Wang, Xu Yang, and Zhanping You), Jul., 1343

Performance testing

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

Permafrost

Evolution of the Temperature Field of the Subgrade in the Permafrost Regions of the Great Khingan Mountains (Haiping Liu, Lin Ding, Yang Yang, Meng Guo, and Yiqi Wang), Nov., 2319

Permanent deformation

Preliminary Investigation of Predicting Permanent Deformations of Unbound Granular Materials Using Miniaturized Pressuremeter Cyclic Data (Alaa M. Shaban and Paul J. Cosentino), Sep., 1942

Permeability

Evaluating the Mesostructural Changes of Laboratory Created Soil-Rock Mixtures Using a Seepage Test Based on NMR Technology (Shangxin Feng, Junrui Chai, Zengguang Xu, and Yuan Qin), May, 879

Permeation grouting

Modeling of Permeation and Fracturing Grouting in Sand: Laboratory Investigations (Wen-Chieh Cheng, James C. Ni, Jack S. Shen, and Zhi-Feng Wang), Sep., 2067

Perturb and observe

PV Module Integrated Dual Boost Isolated dc-dc Converter Fed Three-Phase Micro-Inverter (P. Geetha and S. Ravi), May, 1145

Pervious concrete

Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties (Snehasish Mondal and Krishna Prapoorna Biligiri), May, 892

Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique (Surya Pratap Singh and Krishna Prapoorna Biligiri), Nov., 2440

Phase transition

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Phased array

A Pulse Compression Technique for Improving the Temporal Resolution of Ultrasonic Testing (Jingpin Jiao, Ting Ma, Song Hou, Bin Wu, and Cunfu He), May, 1238

Photocatalytic activity

Photocatalytic Activity of N-Doped TiO_2 to Vehicle Exhaust in Road Tunnel (T. Wang and T. Xu), May, 1076

Photovoltaic (PV) array

Performance Evaluation of Standalone Photovoltaic System with Isolated Dual-Inductor dc-dc Converter for Water-Pumping Application (M. Mohammadha Hussaini and A. Josephine Amala), May, 1122

Photovoltaic module integrated microinverter

PV Module Integrated Dual Boost Isolated dc-dc Converter Fed Three-Phase Micro-Inverter (P. Geetha and S. Ravi), May, 1145

Photovoltaic system

Implementation of PV System Integrated DSTATCOM with Modified UVT Control Scheme for Harmonic and Neutral Current Elimination (P. Govindasamy and R. Anita), Sep., 1832

Performance Evaluation of PV-Supported STATCOM for Voltage and Frequency Regulation of Standalone SEIG System (K. Tamilselvan and R. Anita), Jan., 266 Voltage Sensorless Controller for Photovoltaic Integrated Shunt Active Power Filter for

Enhancement of Power Quality (C. Ramak-

rishnan and R. Pradeep), Jan., 252

Physical fitness

A Novel Approach to Evaluating the Performance of Physical Fitness by Combining Statistical Inference with the Radar Chart (Yun-Tsan Lin, Tsang-Chuan Chang, and Kuen-Suan Chen), Jul., 1498

Physical fitness index

A Novel Approach to Evaluating the Performance of Physical Fitness by Combining Statistical Inference with the Radar Chart (Yun-Tsan Lin, Tsang-Chuan Chang, and Kuen-Suan Chen), Jul., 1498

Physical modelling technique

Prediction of Quantitative Response of Under-Reamed Anchor Piles in Soft Clay Using Laboratory Model Study (Y. S. Golait, A. H. Padade, and T. Cherian), Mar., 507

Physical properties

Experimental Study in the Modification of Mortar Samples with Incorporated Rice Husk (Jiesheng Liu, Faping Li, Xiang He, Xiaofan Liu, and Rongtang Zhang), May, 967

Physiological information

Physiological Information for Pavement Ride Quality Verification (K. Tomiyama and A. Kawamura), Jan., 227

Pier streamlining

Nature-Inspired Bridge Scour Countermeasures: Streamlining and Biocementation (Junliang Tao, Junhong Li, Xiangrong Wang, and Ruotian Bao), Jul., 1376

Piezoelectric ceramic

A Design of an Instrument Based on a Piezoelectric Actuator to Study the Force Output of Piezoelectric Ceramic (Zhichao Pei, Weibin Rong, Lefeng Wang, Shupeng Wang, and Lining Sun), Sep., 1852

Pile group

Ultimate Lateral Resistance of Quadrangle Array Piles Using the Strain Wedge Model on Soil Subgrade (Jiseong Kim and Gi-Chun Kang), Nov., 2339

Pile spacing

Experimental Study of Micropile Lateral Resistance Effectiveness (Y. Du, M. Bai, Y. Chen, X. Wang, and Z. Li), Mar., 523

Pile-net structural subgrade

Model Test of the Long-Term Behavior of a Pile-Net Structure Subgrade for High-Speed Railways (Xilin Lü, Quan Ma, Linlong Mu, and Hang Fang), Nov., 2311

Pitting

Pitting Formation in Concave-Convex Gears Manufactured from AISI 8620 Steel (Mahir Uzun, Mehmet Mehdi Münis, and Hayrettin Düzcükoğlu), Jul., 1708

Plasma

A Study on the Effect of Plasma Treatment on Thermal Comfort Properties of Cotton Fabric (A. Jebastin Rajwin and C. Prakash), Sep., 1762

Poisson distribution

A New Mixed Poisson Distribution: Modeling and Applications (Mina Habibi and Akbar Asgharzadeh), Jul., 1728

Polyester matrix

3D Quasi-Static Strengths and Elastic Constants of Glass Fiber Reinforced Polyester Composite Extracted From a Wind Turbine Blade (H. G. Kotik and J. E. Perez Ipiña), Jan., 55

Polymer

Accuracy of Heat-Release Rate Measured in Microscale Combustion Calorimetry (H. Guo, R. E. Lyon, and N. Safronava), May, 1090

Polymer material

Impact Properties of Multi-Wall Carbon Nanotubes Modified Composites (Y. Yuan, X. Yao, Y. Ma, and B. Liu), May, 1261

Polymer-modified binders

Nonrecoverable Compliance and Recovery Behavior of Polymer-Modified and Reclaimed Asphalt Pavement (RAP)–Modified Binders in Arkansas (Mohammed Ziaur Rahaman, Zahid Hossain, and Musharraf Zaman), Nov., 2483

Polypropylene

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Polyvinyl alcohol fibers

Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles (WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and DaFu Cao), Nov., 2330

Pore

An Experimental Study on Cement-Solidified Cd-Contaminated Soils under Drying-Wetting Cycles (Huikai Liu, Haijun Lu, Xiong Zhang, Jixiang Li, and Weiwei Wang), Mar., 493

Pore distribution

Investigation of the Synthesized Retarder on Cement Slurry Hydration Based on Low Field NMR (Zhigang Peng, Jinhua Huo, Zhongbin Ye, Rui Zhang, and Qian Feng), Nov., 2431

Pores and fractures

Evaluating the Mesostructural Changes of Laboratory Created Soil-Rock Mixtures Using a Seepage Test Based on NMR Technology (Shangxin Feng, Junrui Chai, Zengguang Xu, and Yuan Qin), May, 879

Porosity

Evaluating the Mesostructural Changes of Laboratory Created Soil-Rock Mixtures Using a Seepage Test Based on NMR Technology (Shangxin Feng, Junrui Chai, Zengguang Xu, and Yuan Qin), May, 879 Resistivity, Penetrability and Porosity of Concrete: A Tripartite Relationship (A. Bediwy and M. T. Bassuoni), Mar., 549 Study of the Efficiency and Temperature Loss Caused by Degassing and Filtration of AlSi₉Cu₃ Alloy (C. Demian, D. Ferreño, E. Ruiz, and J. A. Casado), Mar., 772

Porous-asphalt concrete

Laboratory Evaluation of Aging on Engineering Properties of Fine-Graded Porous-Asphalt Concrete (M.-C. Liao, Y.-Y. Lin, and M.-Y. Tseng), Jan., 215

Portable X-ray imaging

Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images (Jack L. Glover, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1462

Portions

Sampling Concrete from a Revolving Drum Truck Mixer (John J. Schemmel, Tiffany N. Kolba, Michael P. Salguero, and Matthew West), Nov., 2459

Post-installed anchors

Definition and Quantification of Anchor Ductility and Implications on Seismic Design (P. Mahrenholtz and R. Eligehausen), Jan., 370

Power

Iterative Kernel Principal Component for Large-Scale Data Set (Weiya Shi), Sep., 2130

Power cables

A Strategy to Determine Partial Discharge in XLPE Power Cables Using Acoustic Emission Detection Technique (D. F. Jingle Jabha, K. Selvi, and R. Joselin), Jan., 283

Power spectral density

Simulated Road Profiles According to ISO 8608 in Vibration Analysis (P. Múčka), Jan., 405

Vibration Levels in Vans as a Function of Payload and Leaf Spring Sheet Number (Péter Böröcz), Jan., 236

Power ultrasound

Determination of the Cavitation Range of Power Ultrasound in an Aluminum Alloy Melt (Sichao Su, Xiaoqian Li, Ruiqing Li, and Wu Zhang), Nov., 2616

Pozzolan

Long-Term Compressive Behavior of Concretes with Sugarcane Bagasse Ash as a Supplementary Cementitious Material (G. C. Cordeiro, O. A. Paiva, R. D. Toledo Filho, E. M. R. Fairbairn, and L. M. Tavares), Mar., 564

Pozzolanic activity

Long-Term Compressive Behavior of Concretes with Sugarcane Bagasse Ash as a Supplementary Cementitious Material (G. C. Cordeiro, O. A. Paiva, R. D. Toledo Filho, E. M. R. Fairbairn, and L. M. Tavares), Mar., 564

Precision instrument

A Design of an Instrument Based on a Piezoelectric Actuator to Study the Force Output of Piezoelectric Ceramic (Zhichao Pei, Weibin Rong, Lefeng Wang, Shupeng Wang, and Lining Sun), Sep., 1852

Precision turfgrass management

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

Prediction

Analysis and Prediction for Time Series on Torque Friction of Rolling Bearings (X. Xia, Z. Chang, Y. Li, L. Ye, and M. Qiu), May, 1022

Predictive modeling

Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures (D. J. Mensching, M. M. Jeong, and L. Myers Mc-Carthy), Jan., 127

Pre-existing cracks

On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects (M. Saadati, P. Forquin, K. Weddfelt, P. L. Larsson, and F. Hild), Jan., 33

Pre-existing defects

Mechanical Characterization of Granite Rock Materials: On the Influence from Pre-Existing Defects (D. Jelagin, M. Saadati, I. Jerjen, and P.-L. Larsson), Mar., 540

Premature failures

Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications (M. Hasanuzzaman, L. Hashemian, and A. Bayat), Jan., 88

Pressuremeter

Preliminary Investigation of Predicting Permanent Deformations of Unbound Granular Materials Using Miniaturized Pressuremeter Cyclic Data (Alaa M. Shaban and Paul J. Cosentino), Sep., 1942

Process capability

Effective Control Chart for Monitoring the Capability Stability of Non-Normal Processes Having S-Type Quality (Mou-Yuan Liao and Hsiao-Chi Ling), May, 1196

Process capability index

Evaluation of Two Process Yields in Acceptance Sampling Plans (K. A. Butt, M. Aslam, F.-K. Wang, H. Lee, and C.-H. Jun), Mar., 756

Production Yield for Multiple Line Processes: Product Acceptance Determination (W. L. Pearn, Y. T. Tai, and Y. T. Chiu), Jan., 340

Product acceptance determination

Production Yield for Multiple Line Processes: Product Acceptance Determination (W. L. Pearn, Y. T. Tai, and Y. T. Chiu), Jan., 340

Product development

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Product qualification

Definition and Quantification of Anchor Ductility and Implications on Seismic Design (P. Mahrenholtz and R. Eligehausen), Jan., 370

Productivity

Combined Effect of Heat Storage, Reflective Material, and Additional Heat Source on the Productivity of a Solar Still—Techno-Economic Approach (D. Dsilva Winfred Rufuss, S. Iniyan, and L. Suganthi), Nov., 2692

Project characteristics

Exploring the Links between Task-Level Knowledge Management and Project Success (L.-R. Yang, J.-H. Chen, and C.-H. Lee), May, 1220

Project success

Exploring the Links between Task-Level Knowledge Management and Project Success (L.-R. Yang, J.-H. Chen, and C.-H. Lee), May, 1220

Protective clothing

Validation of a Clothing Heat Transfer Model in Nonisothermal Test Conditions (Meredith McQuerry), Jan., 1

Prototype "soil-foundation" system

Prediction of Quantitative Response of Under-Reamed Anchor Piles in Soft Clay Using Laboratory Model Study (Y. S. Golait, A. H. Padade, and T. Cherian), Mar., 507

Pseudo dc link

Performance Evaluation of Standalone Photovoltaic System with Isolated Dual-Inductor dc-dc Converter for Water-Pumping Application (M. Mohammadha Hussaini and A. Josephine Amala), May, 1122

Pseudo-dc link

PV Module Integrated Dual Boost Isolated dc-dc Converter Fed Three-Phase Micro-Inverter (P. Geetha and S. Ravi), May, 1145

Pull-out test

Electromagnetic Crimping in Tube-to-Cylinder Configuration: Influence of the Base Profiles on the Joint Quality (R. Kumar and S. D. Kore), May, 1064

Pulsed eddy current

Pulsed Eddy Current Applied to Measure Residual Stress in Welding (Abbas Habibalahi, Masoumeh Habibalahi, and Kaveh Samadian), Nov., 2623

Pulse-width modulation (PWM) technique

Concert and Analysis of Auto-Tuning Dual-Feedback Biological Harmonic Controller for Industrial Claims (P. M. Balasubramaniam and M. Srinivasan), May, 1136

Purchase behavior

Using the DEMATEL Method to Explore the Critical Factors That Influence Visitors to Purchase Museum Cultural Products (Chin-Tsai Lin, Chuan Lee, Sih-Wun Wang, and Yi-Hsueh Chen), Sep., 2045

Pushoff specimen

Shear Transfer in Normal- and High-Strength Recycled Aggregate Concrete (S. A. Waseem and B. Singh), Jan., 178

Q

Qingchuan rock-modified asphalt

Modification Mechanism and Performance of Qingchuan Rock Asphalt–Modified Asphalt (Limin Li, Zhaoyi He, Weidong Liu, Jianqing Jiang, and Cheng Hu), Jul., 1610

Quality control

Assessment of Compaction Quality Based on Two Index Parameters from Roller-Integrated Compaction Measurements (Z.-H. Nie, T. Jiao, X. Wang, and T. Qiu), Jan., 428 Early Age Thermal Measurements of Soil-Cement Mixtures for Quality Control during Paving (W. Griffin Sullivan, Isaac L. Howard, Tim Cost, and Jay Shannon), Sep., 1957

Quantiles

Interval Estimation of Quantile Difference in the Two-Parameter Exponential Distributions (Ayman Baklizi), Nov., 2654

Quantitative analysis

Rietveld Quantitative Stability of Portland Blast Furnace Slag Cement Between Internal and External Standard Methods (P. Zhao, X. Liu, L. Lu, and P. Wang), Jan., 191

Quantitative response

Prediction of Quantitative Response of Under-Reamed Anchor Piles in Soft Clay Using Laboratory Model Study (Y. S. Golait, A. H. Padade, and T. Cherian), Mar., 507

Quasi-oedometric

On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects (M. Saadati, P. Forquin, K. Weddfelt, P. L. Larsson, and F. Hild), Jan., 33

R

Rényi entropy

A New Class of Beta-Complementary Exponential Power Series Distributions (E. Mahmoudi, R. S. Meshkat, and M. Entezari), Sep., 2171

Radar chart

A Novel Approach to Evaluating the Performance of Physical Fitness by Combining Statistical Inference with the Radar Chart (Yun-Tsan Lin, Tsang-Chuan Chang, and Kuen-Suan Chen), Jul., 1498

Radiation inspection

The Case for Technical Performance Standards for Radiation Inspection Systems (Larry Hudson), Jan., 8

Radioactivity

Assessment of Radioactivity in Concrete Made with e-Waste Plastic (K. Senthil Kumar, P. V. Premalatha, K. Baskar, G. Sankaran Pillai, and P. Shahul Hameed), Mar., 574

Radiography

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

Radon emanation

Assessment of Radioactivity in Concrete Made with e-Waste Plastic (K. Senthil Kumar, P. V. Premalatha, K. Baskar, G. Sankaran Pillai, and P. Shahul Hameed), Mar., 574

Rain-flow counting method

Research on Load Spectrum Construction of Bench Test Based on Automotive Proving Ground (Xiaobing Yang, Xintian Liu, Jiachi Tong, Yansong Wang, and Xiaolan Wang), Jan., 244

Random copolymer

Effects of Injection Molding and Storage Conditions on Polypropylene Copolymer (Zehra S. Kalkan-Sevinc and Michael T. K. Ling), Jul., 1518

Ratio statistic

Evaluation of Two Process Yields in Acceptance Sampling Plans (K. A. Butt, M. Aslam, F.-K. Wang, H. Lee, and C.-H. Jun), Mar., 756

Reacted and activated rubber

Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation (Sampat Kedarisetty, Gourab Saha, Krishna Prapoorna Biligiri, and Jorge B. Sousa), Nov., 2511

Ready-mixed

Sampling Concrete from a Revolving Drum Truck Mixer (John J. Schemmel, Tiffany N. Kolba, Michael P. Salguero, and Matthew West), Nov., 2459

Real-time monitoring

Effect of Closely Spaced Twin Tunnel Construction beneath an Existing Subway Station: A Case Study (Xu Zhang, Chengping Zhang, and Jianchen Wang), Jul., 1559

Reclaimed asphalt pavement (RAP)

Evaluating the Effect of High RAP Content on Asphalt Mixtures and Binders Fatigue Behavior (Umme Amina Mannan, Hasan M. Faisal, Md Mehedi Hasan, and Rafiqul A. Tarefder), Sep., 1749 Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures (D. J. Mensching, M. M. Jeong, and L. Myers McCarthy), Jan., 127

Recycled aggregate concrete

Shear Transfer in Normal- and High-Strength Recycled Aggregate Concrete (S. A. Waseem and B. Singh), Jan., 178

Recycled asphalt pavement

Rutting Evaluation of Alaskan Asphalt Pavement Containing Sustainable Materials (Sheng Zhao and Jenny Liu), Jul., 1366

Recycled asphalt shingles

Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures (D. J. Mensching, M. M. Jeong, and L. Myers McCarthy), Jan., 127

Recycled tire rubber

Low Temperature Properties of Waste Edible Vegetable Oil Rejuvenated Asphalt Binder with Recycled Tire Rubber (D. Zhang, M. Chen, S. Wu, J. Zheng, and Y. Sang), Mar., 602

Reinforced concrete

Alternative Setup Apparatus to Test ASTM A944-10 Beam-End Specimens (Basso Trujillo Pasquale, René Malo, and Marc Jolin), Jul., 1741

Experimental Study on the Impact Properties of Concrete Bridge Pier Reinforced with Stainless Steel Rebar (Guoxue Zhang, Ziqing Chen, Juan Lu, Shixiang Xu, and Xiwu Zhou), Jul., 1650

Reinforcement

Alternative Setup Apparatus to Test ASTM A944-10 Beam-End Specimens (Basso Trujillo Pasquale, René Malo, and Marc Jolin), Jul., 1741

Rejuvenating

Low Temperature Properties of Waste Edible Vegetable Oil Rejuvenated Asphalt Binder with Recycled Tire Rubber (D. Zhang, M. Chen, S. Wu, J. Zheng, and Y. Sang), Mar., 602

Relative dynamic elastic modulus

Experimental Study of Mechanical Properties of PVA-ECC under Freeze-Thaw Cycles (WenJie Ge, Chen Cai, Xiang Ji, Ashraf F. Ashour, and DaFu Cao), Nov., 2330

Remaining creep life

Response Surface Methodology for the Remaining Creep Life Estimation by the Small Punch Creep Test (Ali Moradi and Nasser Soltani), Nov., 2549

Repeatability

Analytical Performance Test of Pancreas Cancer miRNA Chip (C.-H. Lee, J. Lee, J. Lee, J. Lee, J. Heo, and M. S. Noh), May, 865 Assessing Crack Susceptibility of Asphalt Concrete Mixtures with Overlay Tester (Victor M. Garcia, Alejandro Miramontes, Jose Garibay, Imad Abdallah, and Soheil Nazarian), May, 924

Repetitive group sampling (RGS) plan

Evaluation of Two Process Yields in Acceptance Sampling Plans (K. A. Butt, M. Aslam, F.-K. Wang, H. Lee, and C.-H. Jun), Mar., 756

Repetitive sampling plan

Sequential Sampling Plan in the Truncated Life Test for Weibull Distribution (Hasan Rasay, Morteza Pourgharibshahi, and Mohammad Saber Fallahnezhad), Mar., 693

Reproducibility

Analytical Performance Test of Pancreas Cancer miRNA Chip (C.-H. Lee, J. Lee, J. Lee, J. Heo, and M. S. Noh), May, 865

Residual life

Fatigue Crack Growth Testing and Evaluation for Aluminum Alloys at Temperatures of 25° C and -70° C (M. D. Liu and J. J. Xiong), Jul., 1698

Residual stress measurement

Pulsed Eddy Current Applied to Measure Residual Stress in Welding (Abbas Habibalahi, Masoumeh Habibalahi, and Kaveh Samadian), Nov., 2623

Residue

Functional Layer Designation of Combined Chip Seal and Slurry Seal in Airport Pavement (Jie Yuan, Siyuan Xu, Xiangdao Hou, Feipeng Xiao, Changshan Jiang, and Yong Luo), May, 956

Resonance frequency

Locating Wood Defects Based on Vibration Modes (Y. Miao, M. Zhong, and Z. Liu), Mar., 534

Resonant column

Evaluation of Nondestructiveness of Resonant Column Testing for Characterization of Asphalt Concrete Properties (P. Tavassoti-Kheiry, I. Boz, M. Solaimanian, and T. Qiu), Mar., 631

Resort hotel

An Evaluation of Vacation Lifestyle Scale—Using International and Theme Resort Hotels in Taiwan as Examples (S.-Y. Lin, P.-J. Juan, and T.-Y. Hsu), Jan., 331

Response surface methodology

Response Surface Methodology for the Remaining Creep Life Estimation by the Small Punch Creep Test (Ali Moradi and Nasser Soltani), Nov., 2549

Restriction of hazardous substances compliance

Assessment of Hazardous Substances in Electrical Cables: Implementation of RoHS Regulations in India (U. Rambabu, V. Balaram, R. Ratheesh, S. Chatterjee, M. Kishore Babu, and N. R. Munirathnam), Sep., 1930

Rheological property

Case Study: Evaluation of the Effect of Extraction Temperature on WMA Binder Containing Sasobit Additive (Shenghua Wu, Weiguang Zhang, Shihui Shen, and Balasingam Muhunthan), Sep., 2140

Rheology

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Rice husk

Experimental Study in the Modification of Mortar Samples with Incorporated Rice Husk (Jiesheng Liu, Faping Li, Xiang He, Xiaofan Liu, and Rongtang Zhang), May, 967

Ride quality

Physiological Information for Pavement Ride Quality Verification (K. Tomiyama and A. Kawamura), Jan., 227

Rietveld

Rietveld Quantitative Stability of Portland Blast Furnace Slag Cement Between Internal and External Standard Methods (P. Zhao, X. Liu, L. Lu, and P. Wang), Jan., 191

Rigid-flexible composite pavement

Optimization on Additives of SBS and CTR for Interlayer Asphalt in Rigid-Flexible Composite Pavement (Sheng Li, Fan Yang, and Zhao-Hui Liu), Mar., 593

Risk management

Decision Support System for Management Decision in High-Risk Business Environment (Ming-Fu Hsu and Chung-I Huang), Sep., 2240

Road engineering

Evaluation for VOF Simulation of Flow Field in Asphalt Foaming Chamber Based on Volume Fraction (Fu-Min Liu, An-Lin Wang, and Zhen-Sheng Fu), Jul., 1391

Road profile

Simulated Road Profiles According to ISO 8608 in Vibration Analysis (P. Múčka), Jan., 405

Rock abrasion

Wear Resistance of Four Rocks Using Rotary Abrasion Test in Dry and Wet Conditions (Taegeon Lee, Seung Oh Lee, Dong-Woo Ryu, and Heejung Youn), Nov., 2389

Rock mechanics

Fragmentation Evolution and Fractal Characteristics of Deep Rocks by Lab Compression-Shear Tests (Shuyun Zhu, Yun Wu, and Liangliang Lu), Jul., 1548

Rockwell hardness

Postweld Heat Treatment Characterization of Mild Steel (E6013) Welded Areas Using Wavelet Transform of Ultrasonic Testing Signals (Tariq M. R. Khan, Amna Maqsood, Saad A. Warraich, and Saeed Khalid), Sep., 2274

Rolling bearings

Analysis and Prediction for Time Series on Torque Friction of Rolling Bearings (X. Xia, Z. Chang, Y. Li, L. Ye, and M. Qiu), May, 1022

Rolling contact fatigue

Variable Slip Ratio Rolling Contact Fatigue Tester (Marcellin Zahui, Satyam Deshmukh, and Subodh Subedi), May, 1042

Rolling friction

Seismic Isolation Characteristics of a Friction System (Biao Wei, Peng Wang, Xuhui He, and Lizhong Jiang), Jul., 1411

Rotary abrasion test

Wear Resistance of Four Rocks Using Rotary Abrasion Test in Dry and Wet Conditions (Taegeon Lee, Seung Oh Lee, Dong-Woo Ryu, and Heejung Youn), Nov., 2389

Rotational rheometer

Optimization on Additives of SBS and CTR for Interlayer Asphalt in Rigid-Flexible Composite Pavement (Sheng Li, Fan Yang, and Zhao-Hui Liu), Mar., 593

Roughness ratio

Advanced Method for Quantifying Socket Roughness and Empirical Correlations (Byeong-Han Jeon, Chae-Min Kim, and Yongkyu Choi), Nov., 2399

Roughness

Effect of Surface Roughness and Hardness of Continuum Materials on Interface Shear Strength of Granular Materials (H. M. Abuel-Naga, H. A. Shaia, and A. Bouazza), Mar., 826

Round-robin test

Mini Round-Robin Test on the Split Hopkinson Pressure Bar (M. A. Kariem, D. Ruan, J. H. Beynon, and D. A. Prabowo), Mar., 457

Rubberized mixture

Evaluating the Rutting Performance of Geosynthetic Reinforced Pavement Containing Rubberized Asphalt Mixtures (A. K. Khiavi, B. Bakhshi, and V. Hojjat), Mar., 610

Rubberized warm mix asphalt mixtures

Assessing Moisture Sensitivity of Rubberized Warm Mix Asphalt Mixtures Using the Surface Free Energy Method and Dynamic Water Pressure Tester (Jiangmiao Yu, Chunlong Xiong, Xiaoning Zhang, Zhesheng Ge, and Guanfeng An), Mar., 580

Ruffier test

Approbation of the Ruffier Test Model Adapted for Children (Ihor Zanevskyy and Lyudmyla Zanevska), May, 872

Rutting

Laboratory Evaluation of Aging on Engineering Properties of Fine-Graded Porous-Asphalt Concrete (M.-C. Liao, Y.-Y. Lin, and M.-Y. Tseng), Jan., 215

Modification Mechanism and Performance of Qingchuan Rock Asphalt-Modified

Asphalt (Limin Li, Zhaoyi He, Weidong Liu, Jianqing Jiang, and Cheng Hu), Jul., 1610

Nonrecoverable Compliance and Recovery Behavior of Polymer-Modified and Reclaimed Asphalt Pavement (RAP)–Modified Binders in Arkansas (Mohammed Ziaur Rahaman, Zahid Hossain, and Musharraf Zaman), Nov., 2483

Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation (Sampat Kedarisetty, Gourab Saha, Krishna Prapoorna Biligiri, and Jorge B. Sousa), Nov., 2511

Rutting depth

Evaluating the Rutting Performance of Geosynthetic Reinforced Pavement Containing Rubberized Asphalt Mixtures (A. K. Khiavi, B. Bakhshi, and V. Hojjat), Mar., 610

Rutting performance

Rutting Evaluation of Alaskan Asphalt Pavement Containing Sustainable Materials (Sheng Zhao and Jenny Liu), Jul., 1366

S

Sample reconstitution method

Effect of Sample Reconstitution Methods on the Behaviors of Granular Materials under Shearing (Yao Li, Yunming Yang, Hai-Sui Yu, and Gethin Roberts), Nov., 2718

Sampling frequency offset (SFO)

Improved Artificial Bee Colony Optimization Approach in UWBOFDM for Frequency Offset Estimation (R. Eswaramoorthi and G. Singaravel), Jan., 317

Sampling

Sampling Concrete from a Revolving Drum Truck Mixer (John J. Schemmel, Tiffany N. Kolba, Michael P. Salguero, and Matthew West), Nov., 2459

Sand

Effect of Sample Reconstitution Methods on the Behaviors of Granular Materials under Shearing (Yao Li, Yunming Yang, Hai-Sui Yu, and Gethin Roberts), Nov., 2718

Sasobit

Case Study: Evaluation of the Effect of Extraction Temperature on WMA Binder Containing Sasobit Additive (Shenghua Wu, Weiguang Zhang, Shihui Shen, and Balasingam Muhunthan), Sep., 2140

Scanning electron microscope (SEM)

Evaluation of Nano-ZnO Dispersed State in Bitumen with Digital Imaging Processing Techniques (R. Li, Y. Dai, P. Wang, C. Sun, J. Zhang, and J. Pei), May, 974

Scenic road

Linking Ecology and Service Function in Scenic Road Landscape Planning: A Spatial Analysis Approach (Xiaochun Qin, Shengnan Cui, and Shu Liu), Jul., 1297

Scour

Evaluation of Soil Saver Walls on Aquatic Organism Passage Through Box Culverts (Madan Neupane, Robert L. Parsons, Jie Han, David A. Parr, and James A. Jacobe), Jul., 1313

Seal strength

Seal Strength Evaluation of Flexible Plastic Films by Machine Testing and Human Peeling (Somporn Nilmanee, Tunyarut Jinkarn, Lerpong Jarupan, Supachai Pisuchpen, and Alaster Yoxall), Jul., 1508

Sealant

Using a Polymer-Based Sealant Material to Make Crack Repair of Asphalt Pavement (Jian Yin, Qiling Pang, Hao Wu, and Weimin Song), Sep., 2056

Second order generalized integrator

Voltage Sensorless Controller for Photovoltaic Integrated Shunt Active Power Filter for Enhancement of Power Quality (C. Ramakrishnan and R. Pradeep), Jan., 252

Second Order Generalized Integrator

Implementation of PV System Integrated DSTATCOM with Modified UVT Control Scheme for Harmonic and Neutral Current Elimination (P. Govindasamy and R. Anita), Sep., 1832

Sector field mass spectrometry

Determination of Trace Elements in High Purity Silver Granules Using Sector Field Inductively Coupled Plasma Mass Spectrometry (S. Swarupa Tripathy, Rajiv K. Swati, Saxena, and Nahar Singh), Jul., 1489

Security imaging

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

Security screening systems

The Case for Technical Performance Standards for Radiation Inspection Systems (Larry Hudson), Jan., 8

Security screening

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

Security X-ray imaging

Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images (Jack L. Glover, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1462

Sediments

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Seismic load

Definition and Quantification of Anchor Ductility and Implications on Seismic Design (P. Mahrenholtz and R. Eligehausen), Jan., 370

Seismic performance

Seismic Isolation Characteristics of a Friction System (Biao Wei, Peng Wang, Xuhui He, and Lizhong Jiang), Jul., 1411

Selective laser melting

Effects of Process Parameters on the Surface Roughness of Stainless Steel 316L Parts Produced by Selective Laser Melting (Derahman Nur Aqilah, Ab Karim Mohd Sayuti, Yusof Farazila, Dambatta Yusuf Suleiman, Mohd Amran Nor Amirah, and Wan Badiuzaman Wan Nur Izzati), Jul., 1673

Selective precipitation

Determination of Trace Elements in High Purity Silver Granules Using Sector Field Inductively Coupled Plasma Mass Spectrometry (S. Swarupa Tripathy, Rajiv K. Swati, Saxena, and Nahar Singh), Jul., 1489

Self-affine fractal

Advanced Method for Quantifying Socket Roughness and Empirical Correlations (Byeong-Han Jeon, Chae-Min Kim, and Yongkyu Choi), Nov., 2399

Self-excited induction generator

Performance Evaluation of PV-Supported STATCOM for Voltage and Frequency Regulation of Standalone SEIG System (K. Tamilselvan and R. Anita), Jan., 266

Sensible heat storage

Combined Effect of Heat Storage, Reflective Material, and Additional Heat Source on the Productivity of a Solar Still—Techno-Economic Approach (D. Dsilva Winfred Rufuss, S. Iniyan, and L. Suganthi), Nov., 2692

Sensitivity analysis

Optimization Analysis of Retrial Machine Repair Problem with Server Breakdown and Threshold Recovery Policy (Kuo-Hsiung Wang, Tseng-Chang Yen, and Jia-Yu Chen), Nov., 2630

The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation (W. C. Yeong, S. L. Lim, M. B. C. Khoo, M. H. Chuah, and A. X. J. Lim), May, 1175

Sequential sampling plan

Sequential Sampling Plan in the Truncated Life Test for Weibull Distribution (Hasan Rasay, Morteza Pourgharibshahi, and Mohammad Saber Fallahnezhad), Mar., 693

Service function

Linking Ecology and Service Function in Scenic Road Landscape Planning: A Spatial Analysis Approach (Xiaochun Qin, Shengnan Cui, and Shu Liu), Jul., 1297

Settlement

Effect of Closely Spaced Twin Tunnel Construction beneath an Existing Subway Station: A Case Study (Xu Zhang, Chengping Zhang, and Jianchen Wang), Jul., 1559

Settlement distribution

Soil Arching Effect Analysis via a Modified Finite Element Model Based on a Field Test (Xiangdong Li, Yu Miao, and Ke Cheng), Sep., 2218

Shaking table tests

Dynamic Response of Shallow-Buried Tunnels under Asymmetrical Pressure Distributions (X. L. Jiang, F. F. Wang, H. Yang, P. Y. Lian, J. Chen, J. Y. Niu, and G. C. Sun), Jul., 1574

Shallow-buried tunnel

Dynamic Response of Shallow-Buried Tunnels under Asymmetrical Pressure Distributions (X. L. Jiang, F. F. Wang, H. Yang, P. Y. Lian, J. Chen, J. Y. Niu, and G. C. Sun), Jul., 1574

Shape memory polyurethane

Synthesis and Performance Evaluation of Epoxy Resin–Modified Shape Memory Polyurethane Sealant (Dongya Shen, Shuang Shi, and Tao Xu), Jul., 1452

Shape memory property

Synthesis and Performance Evaluation of Epoxy Resin–Modified Shape Memory Polyurethane Sealant (Dongya Shen, Shuang Shi, and Tao Xu), Jul., 1452

Shear bond strength

Optimization on Additives of SBS and CTR for Interlayer Asphalt in Rigid-Flexible Composite Pavement (Sheng Li, Fan Yang, and Zhao-Hui Liu), Mar., 593

Shear strength

Shear Transfer in Normal- and High-Strength Recycled Aggregate Concrete (S. A. Waseem and B. Singh), Jan., 178 Using a Polymer-Based Sealant Material to Make Crack Repair of Asphalt Pavement (Jian Yin, Qiling Pang, Hao Wu, and Weimin Song), Sep., 2056

Shear

Strength of Aluminum Alloys Under Static Mixed-Mode I/II Loading Conditions (F. Tariq, M. Khan, M. Farhan, and M. Z. Siddiqui), Jan., 294

Shield tunneling

An Experimental Study of the Performance of Two-Component Backfilling Grout Used behind the Segmental Lining of a Tunnel-Boring Machine (Mohammad Sharghi, Hamid Chakeri, Hassan Afshin, and Yilmaz Ozcelik), Sep., 2083

Shift size misspecification

The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation (W. C. Yeong, S. L. Lim,

M. B. C. Khoo, M. H. Chuah, and A. X. J. Lim), May, 1175

Shot peening

Effects of Process Parameters on the Surface Roughness of Stainless Steel 316L Parts Produced by Selective Laser Melting (Derahman Nur Aqilah, Ab Karim Mohd Sayuti, Yusof Farazila, Dambatta Yusuf Suleiman, Mohd Amran Nor Amirah, and Wan Badiuzaman Wan Nur Izzati), Jul., 1673

Shrinkage

Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete (Behzad Hatami, Amir Mohammad Ramezanianpour, and Amir Saedi Daryan), Jan., 141

Shrinkage-reducing admixtures

Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete (Behzad Hatami, Amir Mohammad Ramezanianpour, and Amir Saedi Daryan), Jan., 141

Shunt active power filter

Concert and Analysis of Auto-Tuning Dual-Feedback Biological Harmonic Controller for Industrial Claims (P. M. Balasubramaniam and M. Srinivasan), May, 1136 Voltage Sensorless Controller for Photovoltaic Integrated Shunt Active Power Filter for Enhancement of Power Quality (C. Ramakrishnan and R. Pradeep), Jan., 252

Side resistance

Advanced Method for Quantifying Socket Roughness and Empirical Correlations (Byeong-Han Jeon, Chae-Min Kim, and Yongkyu Choi), Nov., 2399

Sigmoidal model

Preliminary Investigation of Predicting Permanent Deformations of Unbound Granular Materials Using Miniaturized Pressuremeter Cyclic Data (Alaa M. Shaban and Paul J. Cosentino), Sep., 1942

Signal correction

Improvement of Measuring Accuracy for Coating Covered on Conical Steel Shells by Correction of Eddy Current Signals (Meixian Wu, Dongli Zhang, Zhenmao Chen, and Yong Li), Jan., 17

Silica fume

Crumb Rubber and Silica Fume Inclusions in Pervious Concrete Pavement Systems: Evaluation of Hydrological, Functional, and Structural Properties (Snehasish Mondal and Krishna Prapoorna Biligiri), May,

Silver addition

Effect of Silver Addition on Mechanical Properties and Stress Corrosion Cracking in a Predeformed and Overaged 7055 Aluminum Alloy (Mehdi Shakouri, Mohammad Esmailian, and Saeed Shabestari), Sep., 1891

Silver granules

Determination of Trace Elements in High Purity Silver Granules Using Sector Field Inductively Coupled Plasma Mass Spectrometry (S. Swarupa Tripathy, Rajiv K. Swati, Saxena, and Nahar Singh), Jul., 1489

Simple shear

A Simple Approach to Performing Large Strain Cyclic Simple Shear Tests: Methodology and Experimental Results (Waqas Muhammad, Jidong Kang, Raja K. Mishra, and Kaan Inal), Nov., 2604

Effect of Sample Reconstitution Methods on the Behaviors of Granular Materials under Shearing (Yao Li, Yunming Yang, Hai-Sui Yu, and Gethin Roberts), Nov., 2718

Simulation

A New Application of Beta Gompertz Distribution in Reliability (M. KH. Hassan), Mar., 736

Simulation evaluation

Evaluation for VOF Simulation of Flow Field in Asphalt Foaming Chamber Based on Volume Fraction (Fu-Min Liu, An-Lin Wang, and Zhen-Sheng Fu), Jul., 1391

Single variable theory of analysis

Optimization of Laboratory Preparation of the Emulsified Bioasphalt with Two Emulsifiers (Xi Chen, Hainian Wang, Qinghua Wang, Xu Yang, and Zhanping You), Jul., 1343

Slant shear test

Using a Polymer-Based Sealant Material to Make Crack Repair of Asphalt Pavement (Jian Yin, Qiling Pang, Hao Wu, and Weimin Song), Sep., 2056

Slide wear test rig

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Slurries

Rheological Characteristics of Fine-Grained Soil-Slurries (Rakshith Shetty and Devendra Narain Singh), Nov., 2351

Slurry seal

Functional Layer Designation of Combined Chip Seal and Slurry Seal in Airport Pavement (Jie Yuan, Siyuan Xu, Xiangdao Hou, Feipeng Xiao, Changshan Jiang, and Yong Luo), May, 956

Small punch creep test

Response Surface Methodology for the Remaining Creep Life Estimation by the Small Punch Creep Test (Ali Moradi and Nasser Soltani), Nov., 2549

Soft clay

Model Test of the Long-Term Behavior of a Pile-Net Structure Subgrade for High-Speed Railways (Xilin Lü, Quan Ma, Linlong Mu, and Hang Fang), Nov., 2311

Prediction of Quantitative Response of Under-Reamed Anchor Piles in Soft Clay Using Laboratory Model Study (Y. S. Golait, A. H. Padade, and T. Cherian), Mar., 507

Soft material

Development of an Equibiaxial Tensile Test Device and Associated Test Method for Parameter Identification of Hyperelastic Ogden Model of Soft Material (Jonas A. Pramudita, Harutaka Kubota, Yuji Tanabe, Masato Ito, and Ryoji Watanabe), Jan., 77

Soft phase

Synthesis and Performance Evaluation of Epoxy Resin–Modified Shape Memory Polyurethane Sealant (Dongya Shen, Shuang Shi, and Tao Xu), Jul., 1452

Soft rock socket

Advanced Method for Quantifying Socket Roughness and Empirical Correlations (Byeong-Han Jeon, Chae-Min Kim, and Yongkyu Choi), Nov., 2399

Soil arching effect

Soil Arching Effect Analysis via a Modified Finite Element Model Based on a Field Test (Xiangdong Li, Yu Miao, and Ke Cheng), Sep., 2218

Soil pressure

Experimental Study of Micropile Lateral Resistance Effectiveness (Y. Du, M. Bai, Y. Chen, X. Wang, and Z. Li), Mar., 523

Soil saver wall

Evaluation of Soil Saver Walls on Aquatic Organism Passage Through Box Culverts (Madan Neupane, Robert L. Parsons, Jie Han, David A. Parr, and James A. Jacobe), Jul., 1313

Soil stabilization

Guidance for Investigating Calcite Precipitation by Urea Hydrolysis for Geomaterials (B. S. Shashank, James M. Minto, Devendra Narain Singh, Gráinne El Mountassir, and Charles W. Knapp), Jul., 1527

Soil-cement

Early Age Thermal Measurements of Soil-Cement Mixtures for Quality Control during Paving (W. Griffin Sullivan, Isaac L. Howard, Tim Cost, and Jay Shannon), Sep., 1957

Soil-rock mixtures

Evaluating the Mesostructural Changes of Laboratory Created Soil-Rock Mixtures Using a Seepage Test Based on NMR Technology (Shangxin Feng, Junrui Chai, Zengguang Xu, and Yuan Qin), May, 879

Solar PVTC

Energy and Exergy Efficiency of Flat Plate PVT Collector With Forced Convection (B. Srimanickam, M. M. Vijayalakshmi, and E. Natarajan), Mar., 783

Solar still

Combined Effect of Heat Storage, Reflective Material, and Additional Heat Source on the Productivity of a Solar Still—Techno-Economic Approach (D. Dsilva Winfred Rufuss, S. Iniyan, and L. Suganthi), Nov., 2692

Solid oxide fuel cells

Development of High Temperature Mechanical Rig for Characterizing the Viscoplastic Properties of Alloys Used in Solid Oxide Cells (Tesfaye Tadesse Molla, Fabio Greco, Kawai Kwok, Philipp Zielke, and Henrik Lund Frandsen), Sep., 1918

Solid pharmaceutical products

Nondestructive Evaluation of Solid Pharmaceutical Products Using Wavelet Transformations and Multispectral Data (Fahima Tahir, Muhammad Abuzar Fahiem, Saima Farhan, and Huma Tauseef), Jul., 1399

Solid tine

Comparison of Cultivation Methods Impact on Playability of *Agrostis stolonifera* Greens (K. Dickson, J. Sorochan, G. Munshaw, and A. Thoms), May, 1256

Sound absorption

Investigation and Modeling of Sound Absorption Properties of Thin Layer Wearing Course (Mingliang Li, Bin Xu, Dongwei Cao, Yongjun Fan, and Shujiang Ping), Jan., 46

Spalling

Pitting Formation in Concave-Convex Gears Manufactured from AISI 8620 Steel (Mahir Uzun, Mehmet Mehdi Münis, and Hayrettin Düzcükoğlu), Jul., 1708

Spatial analysis

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

Spatial structure

Linking Ecology and Service Function in Scenic Road Landscape Planning: A Spatial Analysis Approach (Xiaochun Qin, Shengnan Cui, and Shu Liu), Jul., 1297

Spearman's rank correlation coefficient

Rutting Evaluation of Alaskan Asphalt Pavement Containing Sustainable Materials (Sheng Zhao and Jenny Liu), Jul., 1366

Specificity

Analytical Performance Test of Pancreas Cancer miRNA Chip (C.-H. Lee, J. Lee, J. Lee, J. Heo, and M. S. Noh), May, 865

Spectroscopy

Nondestructive Evaluation of Solid Pharmaceutical Products Using Wavelet Transformations and Multispectral Data (Fahima Tahir, Muhammad Abuzar Fahiem, Saima Farhan, and Huma Tauseef), Jul., 1399

Split Hopkinson pressure bar (SHPB) (Kolsky bar)

Mini Round-Robin Test on the Split Hopkinson Pressure Bar (M. A. Kariem, D. Ruan, J. H. Beynon, and D. A. Prabowo), Mar., 457

Split-plot repeated measures

Extracting More from Dynamic Modulus Data Using Split-Plot Repeated Measures Analysis (Ashley Buss, Mohamed Elkashef, and W. Robert Stephenson), Jan., 351

Splitting fatigue test

Fatigue Performance of Vertical Vibration Compacted Cement-Stabilized Recycled Pavement Materials (Yingjun Jiang, Haipeng Liu, and Jinshun Xue), Sep., 2251

Sports fields

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

Stability

Laboratory Investigations of Cold Mix Asphalt for Cold Region Applications (M. Hasanuzzaman, L. Hashemian, and A. Bayat), Jan., 88

Stability tests

Experimental Study on Lime and Fly Ash-Stabilized Sintered Red Mud in Road Base (Jiaming Zhang and Chang Li), Jul., 1539

Stable crack growth

Evaluation of Fracture Tearing Resistance of Dissimilar Metal Welds in Laser Welded Thin Steel Sheets (L. Ambriško and L. Pešek), Mar., 842

Stainless steel rebar

Experimental Study on the Impact Properties of Concrete Bridge Pier Reinforced with Stainless Steel Rebar (Guoxue Zhang, Ziqing Chen, Juan Lu, Shixiang Xu, and Xiwu Zhou), Jul., 1650

Standards

Standard Testing of Glass Revisited - Experimental and Theoretical Aspects (David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica), Sep., 1819

Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468

Statistical analysis

Extracting More from Dynamic Modulus Data Using Split-Plot Repeated Measures Analysis (Ashley Buss, Mohamed Elkashef, and W. Robert Stephenson), Jan., 351

Steel

Effect of Impact Energy in the Esso Test— Part 1: Basic Experiments and Validation of FEM Analysis (Tomoya Kawabata, Masahito Kaneko, and Shuji Aihara), Sep., 2203

Steel strapping tensioning technique (SSTT)

Derivation of Complete Stress-Strain Curve for SSTT-Confined High-Strength Concrete in Compression (H.-P. Lee, A. Z. Awang, W. Omar, and P. L. Y. Tiong), Jan., 168

Steel structures

Testing and Evaluation of Bond Surface Profile Influencing the CFRP Strengthening of Steel Members (A. Cyril Thomas and K. Baskar), Nov., 2569

Steel-reinforced concrete

Alternative Setup Apparatus to Test ASTM A944-10 Beam-End Specimens (Basso Trujillo Pasquale, René Malo, and Marc Jolin), Jul., 1741

Stone cutting machine

Improvement of Energy Efficiency Using a Multi-Input Fuzzy Logic Controller in a Stone Cutting Machine (Said Mahmut Cinar, Hasan Cimen, and I. Sedat Buyuksagis), Nov., 2364

Straight shafted piles

Prediction of Quantitative Response of Under-Reamed Anchor Piles in Soft Clay Using Laboratory Model Study (Y. S. Golait, A. H. Padade, and T. Cherian), Mar., 507

Strain wedge model

Ultimate Lateral Resistance of Quadrangle Array Piles Using the Strain Wedge Model on Soil Subgrade (Jiseong Kim and Gi-Chun Kang), Nov., 2339

Strength

Strength of Aluminum Alloys Under Static Mixed-Mode I/II Loading Conditions (F. Tariq, M. Khan, M. Farhan, and M. Z. Siddiqui), Jan., 294

The Study of UHPC Precast Concrete Containing Incinerator Fly Ash (Ming-Ju Lee, Ming-Gin Lee, Yu-Min Su, Yishuo Huang, and Wen-Chih Tung), Jan., 160

Strength and deformation

Definition and Quantification of Anchor Ductility and Implications on Seismic Design (P. Mahrenholtz and R. Eligehausen), Jan., 370

Strength coefficient

Modeling of Anisotropic Behavior of Aluminum Alloys to Investigate Ductile Fracture for the Improved Formability in the Upsetting Process (H. K. Chirala, M. J. Davidson, G. Srinivasarao, and P. Srinivasaraju), May, 1054

Strength mechanism

Experimental Study on Lime and Fly Ash-Stabilized Sintered Red Mud in Road Base (Jiaming Zhang and Chang Li), Jul., 1539

Strength prediction

Relationship between Computed Rate Constants and the Variability in Maturity-Based Strength Predictions (Chang Hoon Lee and Kenneth C. Hover), Jul., 1715

Strengthening of steel members

Testing and Evaluation of Bond Surface Profile Influencing the CFRP Strengthening of Steel Members (A. Cyril Thomas and K. Baskar), Nov., 2569

Stress corrosion cracking

Effect of Silver Addition on Mechanical Properties and Stress Corrosion Cracking in a Predeformed and Overaged 7055 Aluminum Alloy (Mehdi Shakouri, Mohammad Esmailian, and Saeed Shabestari), Sep., 1891

Stress state

Fatigue Damage Characteristics Considering the Difference of Tensile-Compression Modulus for Asphalt Mixture (Songtao Lv, Xiaoyang Wang, Chaochao Liu, and Shuangshuang Wang), Nov., 2470

Stress transfer

Soil Arching Effect Analysis via a Modified Finite Element Model Based on a Field Test (Xiangdong Li, Yu Miao, and Ke Cheng), Sep., 2218

Stress-strain behavior

Assessment of Stress-Strain Behavior of Corroded Steel Reinforcement Using Digital Image Correlation (DIC) (Ranjitha Rajagopal, Sameer Sharma, Radhakrishna G. Pillai, and Sankara J. Subramanian), Sep., 1874

Stress-strain model

Compressive Behavior of Cement Asphalt Mortar Under Low Confinement (X. Wu and J.-F. Wang), Jan., 108

Stress-strength model

A New Application of Beta Gompertz Distribution in Reliability (M. KH. Hassan), Mar., 736

Strikers

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Stripping

An Innovative Method for Interpretation of Asphalt Boil Test (Akhtarhusein A. Tayebali, Abhilash Kusam, and Christopher Bacchi), Jul., 1622

Strontium modification

Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy (Muhammet Uludağ, Şakir Yazman, Lokman Gemi, Barış Bakircioğlu, Eray Erzi, and Derya Dispinar), Nov., 2592

Structural health monitoring (SHM)

Experimental and Analytical Modal Analysis of Cantilever Beam for Vibration Based Damage Identification Using Artificial

Neural Network (P. S. Rao, V. Ramakrishna, and N. V. D. Mahendra), Mar., 656

Structural health monitoring

Development of Virtual Visual Sensor Applications for Wood Structural Health Monitoring (K. Walker, T. H. Miller, R. Gupta, A. Shariati, and T. Schumacher), Jan., 24

Structure

Seismic Isolation Characteristics of a Friction System (Biao Wei, Peng Wang, Xuhui He, and Lizhong Jiang), Jul., 1411

S-type quality

Effective Control Chart for Monitoring the Capability Stability of Non-Normal Processes Having S-Type Quality (Mou-Yuan Liao and Hsiao-Chi Ling), May, 1196

Subgrade

Evolution of the Temperature Field of the Subgrade in the Permafrost Regions of the Great Khingan Mountains (Haiping Liu, Lin Ding, Yang Yang, Meng Guo, and Yiqi Wang), Nov., 2319

Submerged-arc welding

Fracture-Toughness and Fatigue Crack Growth Evaluation in the Transversal Direction of the Longitudinal Weld of an API X52 Steel Pipeline (D. Angeles-Herrera, A. Albiter, R. Cuamatzi-Meléndez, G. Terán, and Gilberto Ochoa-Ruiz), Sep., 2110

Subway station

Effect of Closely Spaced Twin Tunnel Construction beneath an Existing Subway Station: A Case Study (Xu Zhang, Chengping Zhang, and Jianchen Wang), Jul., 1559

Sucker rod

Numerical Analysis of Magnetic Flux Leakage of Transverse Defects of Sucker Rod (Ou Zhang, Xueye Wei, and Shuxin Yan), Sep., 2265

Sugarcane bagasse ash (SCBA)

Long-Term Compressive Behavior of Concretes with Sugarcane Bagasse Ash as a Supplementary Cementitious Material (G. C. Cordeiro, O. A. Paiva, R. D. Toledo Filho, E. M. R. Fairbairn, and L. M. Tavares), Mar., 564

Superimposed stress field

Behavior and Law of Crack Propagation in the Dynamic-Static Superimposed Stress Field (Renshu Yang, Chenxi Ding, Liyun Yang, Yufei Zhang, and Peng Xu), Nov., 2540

Surface firmness

Comparison of Cultivation Methods Impact on Playability of *Agrostis stolonifera* Greens (K. Dickson, J. Sorochan, G. Munshaw, and A. Thoms), May, 1256

Surface free energy method

Assessing Moisture Sensitivity of Rubberized Warm Mix Asphalt Mixtures Using the Surface Free Energy Method and Dynamic Water Pressure Tester (Jiangmiao Yu, Chunlong Xiong, Xiaoning Zhang, Zhesheng Ge, and Guanfeng An), Mar., 580

Surface profiles

Testing and Evaluation of Bond Surface Profile Influencing the CFRP Strengthening of Steel Members (A. Cyril Thomas and K. Baskar), Nov., 2569

Surface resistivity

Resistivity, Penetrability and Porosity of Concrete: A Tripartite Relationship (A. Bediwy and M. T. Bassuoni), Mar., 549

Surface roughness

Effects of Process Parameters on the Surface Roughness of Stainless Steel 316L Parts Produced by Selective Laser Melting (Derahman Nur Aqilah, Ab Karim Mohd Sayuti, Yusof Farazila, Dambatta Yusuf Suleiman, Mohd Amran Nor Amirah, and Wan Badiuzaman Wan Nur Izzati), Jul., 1673

Electromagnetic Crimping in Tube-to-Cylinder Configuration: Influence of the Base Profiles on the Joint Quality (R. Kumar and S. D. Kore), May, 1064

Physiological Information for Pavement Ride Quality Verification (K. Tomiyama and A. Kawamura), Jan., 227

Surface segregation

Evaluation of Segregation in Asphalt Pavement Surface Using Concave Multifractal Distribution (Mao-ping Ran, Shenqing Xiao, Xing-lin Zhou, and Wang-xin Xiao), Sep., 2100

Survival functions

On the Properties of the UBAC(2) Class of Life Distributions (N. S. A. Ali), Mar., 730

Sweet lime oil

Performance, Combustion and Emission Characteristics of CI Engine Fueled with Sweet Lime Peel Oil (Citrus Limetta) (G. Logesh and Venkataramanan Madhavan), Sep., 1799

Synchronous chip seal

Functional Layer Designation of Combined Chip Seal and Slurry Seal in Airport Pavement (Jie Yuan, Siyuan Xu, Xiangdao Hou, Feipeng Xiao, Changshan Jiang, and Yong Luo), May, 956

Synchrosqueezed wavelet transform

Characteristic Analysis of Welding Crack Acoustic Emission Signals Using Synchrosqueezed Wavelet Transform (Kuanfang He, Qi Li, and Qing Yang), Nov., 2679

Synthesized retarder

Investigation of the Synthesized Retarder on Cement Slurry Hydration Based on Low Field NMR (Zhigang Peng, Jinhua Huo, Zhongbin Ye, Rui Zhang, and Qian Feng), Nov., 2431

Synthetic chart

The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation (W. C. Yeong, S. L. Lim,

M. B. C. Khoo, M. H. Chuah, and A. X. J. Lim), May, 1175

Ί

Taguchi

Effects of Process Parameters on the Surface Roughness of Stainless Steel 316L Parts Produced by Selective Laser Melting (Derahman Nur Aqilah, Ab Karim Mohd Sayuti, Yusof Farazila, Dambatta Yusuf Suleiman, Mohd Amran Nor Amirah, and Wan Badiuzaman Wan Nur Izzati), Jul., 1673

Task

Exploring the Links between Task-Level Knowledge Management and Project Success (L.-R. Yang, J.-H. Chen, and C.-H. Lee), May, 1220

Technical performance standards

The Case for Technical Performance Standards for Radiation Inspection Systems (Larry Hudson), Jan., 8

Techno-economic

Combined Effect of Heat Storage, Reflective Material, and Additional Heat Source on the Productivity of a Solar Still—Techno-Economic Approach (D. Dsilva Winfred Rufuss, S. Iniyan, and L. Suganthi), Nov., 2692

Temperature

Using a Polymer-Based Sealant Material to Make Crack Repair of Asphalt Pavement (Jian Yin, Qiling Pang, Hao Wu, and Weimin Song), Sep., 2056

Temperature effects

Relationship between Computed Rate Constants and the Variability in Maturity-Based Strength Predictions (Chang Hoon Lee and Kenneth C. Hover), Jul., 1715

Temperature field

Evolution of the Temperature Field of the Subgrade in the Permafrost Regions of the Great Khingan Mountains (Haiping Liu, Lin Ding, Yang Yang, Meng Guo, and Yiqi Wang), Nov., 2319

Temporal resolution

A Pulse Compression Technique for Improving the Temporal Resolution of Ultrasonic Testing (Jingpin Jiao, Ting Ma, Song Hou, Bin Wu, and Cunfu He), May, 1238

Tensile properties

Correlation of Deformation Strain with the Tensile Properties and Fracture Mode of the AA 2014 Alloy Using Simulations and Experiments (T. R. Prabhu), May, 999

Tensile strength ratio

An Innovative Method for Interpretation of Asphalt Boil Test (Akhtarhusein A. Tayebali, Abhilash Kusam, and Christopher Bacchi), Jul., 1622

Tensile strength structure coefficient

Fatigue Performance of Vertical Vibration Compacted Cement-Stabilized Recycled Pavement Materials (Yingjun Jiang, Haipeng Liu, and Jinshun Xue), Sep., 2251

Tensile strength

Standard Testing of Glass Revisited - Experimental and Theoretical Aspects (David Z. Yankelevsky, Kevin Spiller, Jeffrey A. Packer, and Michael Seica), Sep., 1819

Test device

Development of an Equibiaxial Tensile Test Device and Associated Test Method for Parameter Identification of Hyperelastic Ogden Model of Soft Material (Jonas A. Pramudita, Harutaka Kubota, Yuji Tanabe, Masato Ito, and Ryoji Watanabe), Jan., 77

Test facility

Review of Design, Construction, and Capabilities of an Air Bladder Load Test Facility (ABLTF) at BCERL for Structural Experimental Enclosure Studies (Ali M. Memari, Thomas Kuczynski, and Ryan L. Solnosky), Jul., 1421

Test methods

Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete (Matthew P. Adams, Racheal D. Lute, Edward G. Moffatt, and Jason H. Ideker), Jul., 1659

Test rig

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Tester

Variable Slip Ratio Rolling Contact Fatigue Tester (Marcellin Zahui, Satyam Deshmukh, and Subodh Subedi), May, 1042

Testing

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Validation of a Clothing Heat Transfer Model in Nonisothermal Test Conditions (Meredith McQuerry), Jan., 1

Tests of grout

An Experimental Study of the Performance of Two-Component Backfilling Grout Used behind the Segmental Lining of a Tunnel-Boring Machine (Mohammad Sharghi, Hamid Chakeri, Hassan Afshin, and Yilmaz Ozcelik), Sep., 2083

Texture evolution

A Simple Approach to Performing Large Strain Cyclic Simple Shear Tests: Methodology and Experimental Results (Waqas Muhammad, Jidong Kang, Raja K. Mishra, and Kaan Inal), Nov., 2604

Thermal comfort

A Study on the Effect of Plasma Treatment on Thermal Comfort Properties of Cotton Fabric (A. Jebastin Rajwin and C. Prakash), Sep., 1762

Thermal conductivity tensor

Determination of the Thermal Conductivity Tensor of Thermally Orthotropic Materials with Transient Line Heat Source Method (Bao Chen, Yiyi Huang, Kang Zhang, and Yujun Cui), Sep., 2033

Thermal damage

Nondestructive Acoustic Emission Test to Evaluate Thermal Damage in Asphalt Concrete Materials (Behzad Behnia, William G. Buttlar, and Henrique Reis), Jan., 118

Thermal measurements

Early Age Thermal Measurements of Soil-Cement Mixtures for Quality Control during Paving (W. Griffin Sullivan, Isaac L. Howard, Tim Cost, and Jay Shannon), Sep., 1957

Thermal resistance

A Study on the Effect of Plasma Treatment on Thermal Comfort Properties of Cotton Fabric (A. Jebastin Rajwin and C. Prakash), Sep., 1762

Thermal shock

Bonding Durability of Two Repair Mortars with Low Modulus Cement and Asphalt Mortar (CA Mortar) (Liu Yunpeng, Wang Fazhou, Hu Shuguang, and Liu Muyu), Jan., 67

Thermally orthotropic materials

Determination of the Thermal Conductivity Tensor of Thermally Orthotropic Materials with Transient Line Heat Source Method (Bao Chen, Yiyi Huang, Kang Zhang, and Yujun Cui), Sep., 2033

Thermo-oxidative

Investigation on Thermo-Oxidative Aging Properties of Asphalt Binder with Hindered Phenolic Antioxidant (W. Wu, L. Li, J. Yu, S. Xu, C. Zhang, and L. Xue), Mar., 624

Thick structure

A Strategy for Inspection of Cracks in a Thick Structure Using an ECT Probe (M. Wu, D. Zhang, Z. Chen, and Y. Li), May, 1250

Thickness measurement

Improvement of Measuring Accuracy for Coating Covered on Conical Steel Shells by Correction of Eddy Current Signals (Meixian Wu, Dongli Zhang, Zhenmao Chen, and Yong Li), Jan., 17

Thin layer wearing course

Investigation and Modeling of Sound Absorption Properties of Thin Layer Wearing Course (Mingliang Li, Bin Xu, Dongwei Cao, Yongjun Fan, and Shujiang Ping), Jan., 46

Three-dimensional (3D) properties

3D Quasi-Static Strengths and Elastic Constants of Glass Fiber Reinforced Polyester

Composite Extracted From a Wind Turbine Blade (H. G. Kotik and J. E. Perez Ipiña), Jan., 55

Three-dimensional reconstruction

MRI Images Segmentation and 3D Reconstruction for Cerebral Cancer Detection (Nadia Smaoui Zghal and Nabil Derbel), Nov., 2707

Three-phase voltage source inverter

PV Module Integrated Dual Boost Isolated dc-dc Converter Fed Three-Phase Micro-Inverter (P. Geetha and S. Ravi), May, 1145

Three-point bending

Mechanical Characterization of Granite Rock Materials: On the Influence from Pre-Existing Defects (D. Jelagin, M. Saadati, I. Jerjen, and P.-L. Larsson), Mar., 540 On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects (M. Saadati, P. Forquin, K. Weddfelt, P. L. Larsson, and F. Hild), Jan., 33

Threshold recovery policy

Optimization Analysis of Retrial Machine Repair Problem with Server Breakdown and Threshold Recovery Policy (Kuo-Hsiung Wang, Tseng-Chang Yen, and Jia-Yu Chen), Nov., 2630

TiAl alloy

Effect of Aluminum Content on Interfacial Reaction of Directionally Solidified TiAl Alloys (C. Cheng, Y. Sui, K. Feng, J. Qi, Y. He, Q. Meng, F. Wei, and Z. Sun), Mar., 764

Time lapse of strain

Experimental Study on Dynamic Strength Improvement Mechanism of Concrete Materials (Dong Lei, Jintao He, Feipeng Zhu, and Pengxiang Bai), Jan., 151

Time series

Analysis and Prediction for Time Series on Torque Friction of Rolling Bearings (X. Xia, Z. Chang, Y. Li, L. Ye, and M. Qiu), May, 1022

Time sweep test

Evaluating the Effect of High RAP Content on Asphalt Mixtures and Binders Fatigue Behavior (Umme Amina Mannan, Hasan M. Faisal, Md Mehedi Hasan, and Rafiqul A. Tarefder), Sep., 1749

Time to fracture

Response Surface Methodology for the Remaining Creep Life Estimation by the Small Punch Creep Test (Ali Moradi and Nasser Soltani), Nov., 2549

Time-dependent fatigue

Creep Fatigue Interaction under Different Test Variables: Mechanics and Mechanisms (Kaustav Barat, S. Sivaprasad, S. Kar, and S. Tarafder), Nov., 2521

Time-frequency analysis

Characteristic Analysis of Welding Crack Acoustic Emission Signals Using Synchrosqueezed Wavelet Transform (Kuanfang He, Qi Li, and Qing Yang), Nov., 2679

Tinius Olsen

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Tire fill embankment

Field Evaluation of Load-Bearing Capacity of Tire Fill Embankment Pavements (Leila Hashemian and Alireza Bayat), Sep., 1901

Tire-derived aggregate

Field Evaluation of Load-Bearing Capacity of Tire Fill Embankment Pavements (Leila Hashemian and Alireza Bayat), Sep., 1901

Tire-road noise

Investigation and Modeling of Sound Absorption Properties of Thin Layer Wearing Course (Mingliang Li, Bin Xu, Dongwei Cao, Yongjun Fan, and Shujiang Ping), Jan., 46

Titanium dioxide

Photocatalytic Activity of N-Doped TiO₂ to Vehicle Exhaust in Road Tunnel (T. Wang and T. Xu), May, 1076

Titanium plate

Determination of the Cavitation Range of Power Ultrasound in an Aluminum Alloy Melt (Sichao Su, Xiaoqian Li, Ruiqing Li, and Wu Zhang), Nov., 2616

Tonemapping

Improved Threat Identification Using Tonemapping of High-Dynamic-Range X-ray Images (Jack L. Glover, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1462

Tool design

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Tool wear

Correlation Between Machinability and Chip Morphology of Austempered Ductile Iron (Ş. Yazman, L. Gemı, M. Uludağ, A. Akdemır, M. Uyaner, and D. Dişpinar), May, 1012

Torsion beam rear axle

Development of Accelerated Durability Tests for Rear Suspension Components under Failure-Correlated Load (Li-Hui Zhao, Jia-Wei Yu, Tie Chen, Jun Li, and Song-Lin Zheng), Sep., 1862

Total harmonic distortion

Concert and Analysis of Auto-Tuning Dual-Feedback Biological Harmonic Controller for Industrial Claims (P. M. Balasubramaniam and M. Srinivasan), May, 1136

Implementation of PV System Integrated DSTATCOM with Modified UVT Control Scheme for Harmonic and Neutral Current Elimination (P. Govindasamy and R. Anita), Sep., 1832

Toxic characteristics leaching procedure

The Study of UHPC Precast Concrete Containing Incinerator Fly Ash (Ming-Ju Lee, Ming-Gin Lee, Yu-Min Su, Yishuo Huang, and Wen-Chih Tung), Jan., 160

Traffic speed deflectometer (TSD)

A Study of the Structural Performance of Flexible Pavements Using Traffic Speed Deflectometer (S. Manoharan, G. Chai, S. Chowdhury, and A. Golding), May, 1280

Transient line heat source method

Determination of the Thermal Conductivity Tensor of Thermally Orthotropic Materials with Transient Line Heat Source Method (Bao Chen, Yiyi Huang, Kang Zhang, and Yujun Cui), Sep., 2033

Transverse relaxation time

Investigation of the Synthesized Retarder on Cement Slurry Hydration Based on Low Field NMR (Zhigang Peng, Jinhua Huo, Zhongbin Ye, Rui Zhang, and Qian Feng), Nov., 2431

Triaixal test

Compressive Behavior of Cement Asphalt Mortar Under Low Confinement (X. Wu and J.-F. Wang), Jan., 108

Trial grouting

Modeling of Permeation and Fracturing Grouting in Sand: Laboratory Investigations (Wen-Chieh Cheng, James C. Ni, Jack S. Shen, and Zhi-Feng Wang), Sep., 2067

Triaxial compression

A Novel Triaxial Test System for Concrete under Passive Confinement (Jiafei Jiang, Pingcheng Xiao, and Benben Li), May, 913

Truncated life test

Sequential Sampling Plan in the Truncated Life Test for Weibull Distribution (Hasan Rasay, Morteza Pourgharibshahi, and Mohammad Saber Fallahnezhad), Mar., 693

Truss action

Shear Transfer in Normal- and High-Strength Recycled Aggregate Concrete (S. A. Waseem and B. Singh), Jan., 178

Tunnel engineering

Dynamic Response of Shallow-Buried Tunnels under Asymmetrical Pressure Distributions (X. L. Jiang, F. F. Wang, H. Yang, P. Y. Lian, J. Chen, J. Y. Niu, and G. C. Sun), Jul., 1574

Turfgrass

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

Twin tunnelling

Effect of Closely Spaced Twin Tunnel Construction beneath an Existing Subway Station: A Case Study (Xu Zhang, Chengping Zhang, and Jianchen Wang), Jul., 1559

Two-component grout

An Experimental Study of the Performance of Two-Component Backfilling Grout Used behind the Segmental Lining of a Tunnel-Boring Machine (Mohammad Sharghi, Hamid Chakeri, Hassan Afshin, and Yilmaz Ozcelik), Sep., 2083

Two-stage optimization method

Optimization Analysis of Retrial Machine Repair Problem with Server Breakdown and Threshold Recovery Policy (Kuo-Hsiung Wang, Tseng-Chang Yen, and Jia-Yu Chen), Nov., 2630

U

Ultimate lateral resistance

Ultimate Lateral Resistance of Quadrangle Array Piles Using the Strain Wedge Model on Soil Subgrade (Jiseong Kim and Gi-Chun Kang), Nov., 2339

Ultra high performance concrete

The Study of UHPC Precast Concrete Containing Incinerator Fly Ash (Ming-Ju Lee, Ming-Gin Lee, Yu-Min Su, Yishuo Huang, and Wen-Chih Tung), Jan., 160

Ultra wideband orthogonal frequency division multiplexing (UWBOFDM)

Improved Artificial Bee Colony Optimization Approach in UWBOFDM for Frequency Offset Estimation (R. Eswaramoorthi and G. Singaravel), Jan., 317

Ultrasonic attenuation

Postweld Heat Treatment Characterization of Mild Steel (E6013) Welded Areas Using Wavelet Transform of Ultrasonic Testing Signals (Tariq M. R. Khan, Amna Maqsood, Saad A. Warraich, and Saeed Khalid), Sep., 2274

Ultrasonic nondestructive testing

A Pulse Compression Technique for Improving the Temporal Resolution of Ultrasonic Testing (Jingpin Jiao, Ting Ma, Song Hou, Bin Wu, and Cunfu He), May, 1238

Ultrasonic technique

Non-Destructive Evaluation of the Bending-Fatigue Damage in Carbon-Fiber-Composite Laminates Based on Ultrasonic Wave Propagation (M. He and T. Yang), Mar., 647

Ultrasonic testing

Postweld Heat Treatment Characterization of Mild Steel (E6013) Welded Areas Using Wavelet Transform of Ultrasonic Testing Signals (Tariq M. R. Khan, Amna Maqsood, Saad A. Warraich, and Saeed Khalid), Sep., 2274

Uncertainty

Relationship between Computed Rate Constants and the Variability in Maturity-Based Strength Predictions (Chang Hoon Lee and Kenneth C. Hover), Jul., 1715

Under-reamed piles

Prediction of Quantitative Response of Under-Reamed Anchor Piles in Soft Clay Using Laboratory Model Study (Y. S. Golait, A. H. Padade, and T. Cherian), Mar., 507

Uniaxial compression load test

Derivation of Complete Stress–Strain Curve for SSTT-Confined High-Strength Concrete in Compression (H.-P. Lee, A. Z. Awang, W. Omar, and P. L. Y. Tiong), Jan., 168

Uniaxial compressive strength

Prediction of Mechanical Performance of Cemented Paste Backfill by the Electrical Resistivity Measurement (Wenbin Xu, Xichun Tian, and Changbing Wan), Nov., 2450

Unit vector template

Implementation of PV System Integrated DSTATCOM with Modified UVT Control Scheme for Harmonic and Neutral Current Elimination (P. Govindasamy and R. Anita), Sep., 1832

Unknown shift size

The Economic and Economic-Statistical Designs of the Synthetic Chart for the Coefficient of Variation (W. C. Yeong, S. L. Lim, M. B. C. Khoo, M. H. Chuah, and A. X. J. Lim), May, 1175

Upstream erosion

Evaluation of Soil Saver Walls on Aquatic Organism Passage Through Box Culverts (Madan Neupane, Robert L. Parsons, Jie Han, David A. Parr, and James A. Jacobe), Jul., 1313

Urea hydrolysis

Guidance for Investigating Calcite Precipitation by Urea Hydrolysis for Geomaterials (B. S. Shashank, James M. Minto, Devendra Narain Singh, Gráinne El Mountassir, and Charles W. Knapp), Jul., 1527

Ureolytic activity

Guidance for Investigating Calcite Precipitation by Urea Hydrolysis for Geomaterials (B. S. Shashank, James M. Minto, Devendra Narain Singh, Gráinne El Mountassir, and Charles W. Knapp), Jul., 1527

Used better than aged (UBA) class of life distribution

On the Properties of the UBAC(2) Class of Life Distributions (N. S. A. Ali), Mar., 730

Used better than aged in convex ordering (UBAC) class of life distribution

On the Properties of the UBAC(2) Class of Life Distributions (N. S. A. Ali), Mar., 730

Used better than aged in expectation (UBAE) class of life distribution

On the Properties of the UBAC(2) Class of Life Distributions (N. S. A. Ali), Mar., 730

U-statistic

Testing Behavior of the Mean Inactivity Time (M. Kayid and S. Izadkhah), Nov., 2649

V

Vacation lifestyle

An Evaluation of Vacation Lifestyle Scale—Using International and Theme Resort Hotels in Taiwan as Examples (S.-Y. Lin, P.-J. Juan, and T.-Y. Hsu), Jan., 331

Validation

Design and Dynamic Force Verification of Instrumented Charpy Strikers for the Tinius Olsen Pendulum Impact Tester (J. Schuurmans), May, 1290

Van

Vibration Levels in Vans as a Function of Payload and Leaf Spring Sheet Number (Péter Böröcz), Jan., 236

Variability

Seismic Isolation Characteristics of a Friction System (Biao Wei, Peng Wang, Xuhui He, and Lizhong Jiang), Jul., 1411

Variable sample size

Multi-Objective Genetic Algorithm for Economic Statistical Design of the T^2 Control Chart with Variable Sample Size: The Updated Markov Chain Approach (Asghar Seif), May, 1209

Variation coefficient

Evaluation of Nano-ZnO Dispersed State in Bitumen with Digital Imaging Processing Techniques (R. Li, Y. Dai, P. Wang, C. Sun, J. Zhang, and J. Pei), May, 974

Vehicle

Simulated Road Profiles According to ISO 8608 in Vibration Analysis (P. Múčka), Jan., 405

Vehicle exhaust

Photocatalytic Activity of N-Doped ${\rm TiO_2}$ to Vehicle Exhaust in Road Tunnel (T. Wang and T. Xu), May, 1076

Vertical porosity distribution

Numerical Simulation of Pervious Concrete Using Discrete Element Modeling Technique (Surya Pratap Singh and Krishna Prapoorna Biligiri), Nov., 2440

Vertical vibration test method

Fatigue Performance of Vertical Vibration Compacted Cement-Stabilized Recycled Pavement Materials (Yingjun Jiang, Haipeng Liu, and Jinshun Xue), Sep., 2251

Vibration

Simulated Road Profiles According to ISO 8608 in Vibration Analysis (P. Múčka), Jan., 405

Vibration Levels in Vans as a Function of Payload and Leaf Spring Sheet Number (Péter Böröcz), Jan., 236

Vibration displacement

Locating Wood Defects Based on Vibration Modes (Y. Miao, M. Zhong, and Z. Liu), Mar., 534

Vibration mode

Locating Wood Defects Based on Vibration Modes (Y. Miao, M. Zhong, and Z. Liu), Mar., 534

Videoextensometry

Evaluation of Fracture Tearing Resistance of Dissimilar Metal Welds in Laser Welded Thin Steel Sheets (L. Ambriško and L. Pešek), Mar., 842

Virtual visual sensors

Development of Virtual Visual Sensor Applications for Wood Structural Health Monitoring (K. Walker, T. H. Miller, R. Gupta, A. Shariati, and T. Schumacher), Jan., 24

Viscoelastic

Investigation of Asphalt Track Behavior Under Cyclic Loading: Full-Scale Testing and Numerical Simulation (Seong-Hyeok Lee, Hai V. Vo, and Dae-Wook Park), May, 934

Viscoplasticity

Development of High Temperature Mechanical Rig for Characterizing the Viscoplastic Properties of Alloys Used in Solid Oxide Cells (Tesfaye Tadesse Molla, Fabio Greco, Kawai Kwok, Philipp Zielke, and Henrik Lund Frandsen), Sep., 1918

Viscosity

Optimization on Additives of SBS and CTR for Interlayer Asphalt in Rigid-Flexible Composite Pavement (Sheng Li, Fan Yang, and Zhao-Hui Liu), Mar., 593

Rheological Behavior and Effective Thermal Conductivity of Non-Newtonian Nanofluids (B. Anil Kumar Naik and A. V. Vinod), Mar., 445

Viscosity index

An Improved Method for Calculating Viscosity Index (VI) of Low Viscosity Base Oils (M. J. Covitch), Mar., 820

V-notch

Dynamic Fracture Characterization of Cantilever Structure Specimens with V-Notch Tips (Zhongwen Yue, Wang Zhang, Yao Song, Qingwen Hu, and Luzhou Xie), Jul., 1434

Void evolution

Application of Nonlinear Ultrasonic Technique to Characterize the Damage Evolution in Structural Steel after Tensile Deformation (Xiao Wang, Xue Wang, Lei Hu, Cheng-chao Du, and Yong Li), Jan., 385

Voltage and frequency control

Performance Evaluation of PV-Supported STATCOM for Voltage and Frequency Regulation of Standalone SEIG System (K. Tamilselvan and R. Anita), Jan., 266

Voltage sensorless controller

Voltage Sensorless Controller for Photovoltaic Integrated Shunt Active Power Filter for Enhancement of Power Quality (C. Ramakrishnan and R. Pradeep), Jan., 252

Voltage source inverter

Voltage Sensorless Controller for Photovoltaic Integrated Shunt Active Power Filter for Enhancement of Power Quality (C. Ramakrishnan and R. Pradeep), Jan., 252

Voltage-doubler boost converter

Implementation of PV System Integrated DSTATCOM with Modified UVT Control Scheme for Harmonic and Neutral Current Elimination (P. Govindasamy and R. Anita), Sep., 1832

Volume fraction

Evaluation for VOF Simulation of Flow Field in Asphalt Foaming Chamber Based on Volume Fraction (Fu-Min Liu, An-Lin Wang, and Zhen-Sheng Fu), Jul., 1391

Volumetric water content

Evaluation of Several Sampling Procedures for Spatial Analysis of Natural Turfgrass Sports Field Properties (C. M. Straw, G. M. Henry, K. Love, R. N. Carrow, and V. Cline), Mar., 714

W

Warm mix asphalt

Case Study: Evaluation of the Effect of Extraction Temperature on WMA Binder Containing Sasobit Additive (Shenghua Wu, Weiguang Zhang, Shihui Shen, and Balasingam Muhunthan), Sep., 2140

Extracting More from Dynamic Modulus Data Using Split-Plot Repeated Measures Analysis (Ashley Buss, Mohamed Elkashef, and W. Robert Stephenson), Jan., 351

Relative Comparison of Complex Dynamic Modulus Predictive Models for Non-Conventional Asphalt Concrete Mixtures (D. J. Mensching, M. M. Jeong, and L. Myers McCarthy), Jan., 127

Rutting Evaluation of Alaskan Asphalt Pavement Containing Sustainable Materials (Sheng Zhao and Jenny Liu), Jul., 1366

Waste edible vegetable oil

Low Temperature Properties of Waste Edible Vegetable Oil Rejuvenated Asphalt Binder with Recycled Tire Rubber (D. Zhang, M. Chen, S. Wu, J. Zheng, and Y. Sang), Mar., 602

Water absorption percent determination

Investigation on the Effect of Shrinkage Reducing Admixtures on Shrinkage and Durability of High-Performance Concrete (Behzad Hatami, Amir Mohammad Ramezanianpour, and Amir Saedi Daryan), Jan., 141

Water states variation

Investigation of the Synthesized Retarder on Cement Slurry Hydration Based on Low Field NMR (Zhigang Peng, Jinhua Huo, Zhongbin Ye, Rui Zhang, and Qian Feng), Nov., 2431

Water vapor permeability

A Study on the Effect of Plasma Treatment on Thermal Comfort Properties of Cotton Fabric (A. Jebastin Rajwin and C. Prakash), Sep., 1762

Wavelet transformation

Nondestructive Evaluation of Solid Pharmaceutical Products Using Wavelet Transformations and Multispectral Data (Fahima Tahir, Muhammad Abuzar Fahiem, Saima Farhan, and Huma Tauseef), Jul., 1399

Waviness

Simulated Road Profiles According to ISO 8608 in Vibration Analysis (P. Múčka), Jan., 405

Wear on gear

Pitting Formation in Concave-Convex Gears Manufactured from AISI 8620 Steel (Mahir Uzun, Mehmet Mehdi Münis, and Hayrettin Düzcükoğlu), Jul., 1708

Wear resistance

Wear Resistance of Four Rocks Using Rotary Abrasion Test in Dry and Wet Conditions (Taegeon Lee, Seung Oh Lee, Dong-Woo Ryu, and Heejung Youn), Nov., 2389

Wear test

Novel Spring-Loaded Wear Test Rig to Test the Material Life of Probes Used in the Ingenious Six-Window Gauging System (Prashanth Swaminathan and Gopalakrishna Keshavanarayana), Sep., 1911

Wear volume index

Wear Resistance of Four Rocks Using Rotary Abrasion Test in Dry and Wet Conditions (Taegeon Lee, Seung Oh Lee, Dong-Woo Ryu, and Heejung Youn), Nov., 2389

Wearing course

Laboratory Performance Evaluation of Reinforced Basalt Fiber in Sealing Asphalt Chips (X. Gu, X. Zhang, J. Lv, Z. Huang, B. Yu, and X. Zou), May, 1269

Weathering

Nanosized Morphology and Mechanical Properties of Recovered Binders from Weathered Asphalt Mixtures (Yan Liu, Junan Shen, Pengcheng Shi, Hong Zhu, and Qiju Gao), Nov., 2498

Weight of evidence

Bayesian Estimates and the Effectiveness of Metal Detection Devices (Paul B. Kantor), Jan., 365

Welding

Pulsed Eddy Current Applied to Measure Residual Stress in Welding (Abbas Habibalahi, Masoumeh Habibalahi, and Kaveh Samadian), Nov., 2623

Welding crack

Characteristic Analysis of Welding Crack Acoustic Emission Signals Using Synchrosqueezed Wavelet Transform (Kuanfang He, Qi Li, and Qing Yang), Nov., 2679

Wiener filtering

A Pulse Compression Technique for Improving the Temporal Resolution of Ultrasonic Testing (Jingpin Jiao, Ting Ma, Song Hou, Bin Wu, and Cunfu He), May, 1238

Wind turbine blade

3D Quasi-Static Strengths and Elastic Constants of Glass Fiber Reinforced Polyester Composite Extracted From a Wind Turbine Blade (H. G. Kotik and J. E. Perez Ipiña), Jan., 55

Wood

Development of Virtual Visual Sensor Applications for Wood Structural Health Monitoring (K. Walker, T. H. Miller, R. Gupta, A. Shariati, and T. Schumacher), Jan., 24

Wood-based composites

Comparison of Mode II Fracture Toughness Test Methods for Wood and Wood-Based Composites (Milad Mohamadzadeh and Daniel Hindman), Sep., 1770 \mathbf{X}

X rays

The Case for Technical Performance Standards for Radiation Inspection Systems (Larry Hudson), Jan., 8

X-ray computed tomography

Mechanical Characterization of Granite Rock Materials: On the Influence from Pre-Existing Defects (D. Jelagin, M. Saadati, I. Jerjen, and P.-L. Larsson), Mar., 540

X-ray diffraction

Investigation of the Synthesized Retarder on Cement Slurry Hydration Based on Low Field NMR (Zhigang Peng, Jinhua Huo, Zhongbin Ye, Rui Zhang, and Qian Feng), Nov., 2431

X-ray images

Studying the Statistics of Natural X-ray Pictures (Praful Gupta, Jack L. Glover, Nicholas G. Jr., and BovikAlan C. Paulter), Jul., 1478

X-ray imaging

Nondestructive Acoustic Emission Test to Evaluate Thermal Damage in Asphalt Concrete Materials (Behzad Behnia, William G. Buttlar, and Henrique Reis), Jan., 118 Testing the Image Quality of Cabinet X-ray Systems for Security Screening: The Revised ASTM F792 Standard (Jack L. Glover, Ronald E. Tosh, Lawrence T. Hudson, and Nicholas G. Paulter), Jul., 1468 Y

Yield criterion

Theoretical Prediction of Forming Limit Diagrams for B1500HS Steel at Elevated Temperature Based on Modified Arrhenius and M–K Models (Hongli Hou, Huiping Li, and Lianfang He), Jul., 1684

Yield function

The Effects of Anisotropic Yield Functions on Plastic Behavior of 304 Stainless Steel (Bora Sener and Mehmet Emin Yurci), Nov., 2584

Young's modulus

Exact Analytical Durometer Hardness Scale Interconversion (P. H. Gilbert and A. J. Giacomin), Sep., 1995

Z

Zonal disintegration phenomenon

Energy-Based Forming Mechanism and Criterion for Zonal Disintegration (Xuguang Chen, Ning Zhang, Mingsheng Zhang, Xiaodong Niu, and Yanlong Li), Sep., 1972

Zoning test

NDT of Cavity Defect in Metallic Plate Using dc Potential Drop Method (Xiaojuan Wang, Wenlu Cai, and Zhenmao Chen), Mar., 641

Zy agent

Assessing Moisture Sensitivity of Rubberized Warm Mix Asphalt Mixtures Using the Surface Free Energy Method and Dynamic Water Pressure Tester (Jiangmiao Yu, Chunlong Xiong, Xiaoning Zhang, Zhesheng Ge, and Guanfeng An), Mar., 580

EXECUTIVE COMMITTEE

Dale F. Bohn, Chairman
Taco van der Maten, Vice Chairman
Andrew G. Kireta, Jr., Vice Chairman
John R. Logar, Chairman of Finance and
Audit Committee
Ralph M. Paroli, Past Chairman
D. Thomas Marsh, Past Chairman
Katharine E. Morgan, President

DIRECTORS

Ferdinando E. Aspesi Dale F. Bohn Joannie W. Chin Cesar A. Constantino Oliver S. Delery, Jr. William Ells John Fletcher R. James Galipeau John Germaine William C. Griese Alan Kaufman Andrew G. Kireta, Jr. John R. Logar D. Thomas Marsh R. Christopher Mathis Katharine E. Morgan Deryck M.S. Omar Ralph M. Paroli Irving S. Scher Arman Shakkaliyev James A. Tann Vicky Taylor Taco van der Maten **Jeff Weiss** Terry O. Woods

INFORMATION FOR AUTHORS

For details regarding paper submission go to http://mc04.manuscript-central.com/astm-jote.

The subject matter must not be of a speculative nature and the contents must not include materials of an advertising nature. The paper must not be seriously defective as to literary form and structure, continuity of thought, and clarity of expression. The substance of the paper should not have been published previously in the open literature.

Authors preparing papers for submittal should observe the conventions of style explained in the ASTM Style Manual. Since the journal does not request page charges, the author is expected to conform to these standard conventions for style and the inclusion of complete references and high-quality figures. SI units are to be used throughout; if data were not measured in SI units, a note should appear to that effect and the original units should be included in parentheses after the SI units.

IN APPRECIATION OF THE REVIEWERS

The high quality of the papers that appear in this publication is a tribute not only to the obvious efforts of the authors represented but to the unheralded, though essential, efforts of their reviewers. It is to the reviewers dedication to upholding the high standards of their profession that this note pays tribute. On behalf of ASTM International and the authors as well, we acknowledge with appreciation their important contribution to the success of this journal.

COMMITTEE ON PUBLICATIONS

Dee Magnoni, Chairman
William J. Likos, Vice Chairman
Dale F. Bohn, ex officio
Jay Bhatt
K. Russell DePriest
Nikhil Gupta
John E. Haddock
Jason H. Ideker
M. R. Mitchell
Richard W. Neu
Majdi A. Othman
Suzanne Pecore
Sudarsan Rachuri
George E. Totten

W. Jason Weiss

Journal of Testing and Evaluation (ISSN 0090-3973) is published in six issues per year by ASTM International. Some issues, in whole or in part, may be Special Issues forcused on a topic of interest to our readers. The views expressed in this journal are not those of ASTM International. The data and opinions appearing in the published material were prepared by and are the responsibility of the contributors, not of ASTM International.

Copyright © 2018 by ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. All rights reserved. This material may not be reproduced or copied, in whole or in part, in any printed, mechanical, electronic, film, or other distribution and storage media without the written consent of the publisher.

Subscriptions include two formats-online access only or online access plus printed volumes. Individual subscriptions: \$273.00 for 1 year online access and \$391.00 for 1 year online access plus printed volumes. Institutional subscriptions (one geographic site via IP access): \$422.00 for 1 year online access and \$629.00 for 1 year online access plus printed volumes. Single copies are \$55.00. For multi-site subscription and pricing, please contact Sales or call 1-877-909-ASTM. To subscribe, please send prepaid order to ASTM International, Customer Service, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 or visit

Photocopy Rights: Authorization to photocopy items for internal, personal, or educational classroom use, or the internal, personal, or educational classroom use of specific clients, is granted by ASTM International provided that the appropriate fee is paid to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, Tel: (978) 646-2600; http://www.copyright.com/

Periodicals postage paid at W. Conshohocken, Pa., and at additional mailing offices.

2498	Nanosized Morphology and Mechanical Properties of Recovered Binders from Weathered Asphalt Mixtures Yan Liu, Junan Shen, Pengcheng Shi, Hong Zhu, and Qiju Gao
2511	Reacted and Activated Rubber (RAR)-Modified Dense-Graded Asphalt Mixtures: Design and Performance Evaluation Sampat Kedarisetty, Gourab Saha, Krishna Prapoorna Biligiri, and Jorge B. Sousa
2521	Creep Fatigue Interaction under Different Test Variables: Mechanics and Mechanisms Kaustav Barat, S. Sivaprasad, S. Kar, and S. Tarafder
2540	Behavior and Law of Crack Propagation in the Dynamic-Static Superimposed Stress Field Renshu Yang, Chenxi Ding, Liyun Yang, Yufei Zhang, and Peng Xu
2549	Response Surface Methodology for the Remaining Creep Life Estimation by the Small Punch Creep Test Ali Moradi and Nasser Soltani
2557	Kinematic Errors on a C-Type Gear with a Parabolic Surface Hsueh-Cheng Yang and Ching-Sheng Chang
2569	Testing and Evaluation of Bond Surface Profile Influencing the CFRP Strengthening of Steel Members A. Cyril Thomas and K. Baskar
2584	The Effects of Anisotropic Yield Functions on Plastic Behavior of 304 Stainless Steel Bora Sener and Mehmet Emin Yurci
2592	Relationship Between Machinability, Microstructure, and Mechanical Properties of Al-7Si Alloy Muhammet Uludağ, Şakir Yazman, Lokman Gemi, Barış Bakircioğlu, Eray Erzi, and Derya Dispinar
2604	A Simple Approach to Performing Large Strain Cyclic Simple Shear Tests: Methodology and Experimental Results Waqas Muhammad, Jidong Kang, Raja K. Mishra, and Kaan Inal
2616	Determination of the Cavitation Range of Power Ultrasound in an Aluminum Alloy Melt Sichao Su, Xiaoqian Li, Ruiqing Li, and Wu Zhang
2623	Pulsed Eddy Current Applied to Measure Residual Stress in Welding Abbas Habibalahi, Masoumeh Habibalahi, and Kaveh Samadian
2630	Optimization Analysis of Retrial Machine Repair Problem with Server Breakdown and Threshold Recovery Policy Kuo-Hsiung Wang, Tseng-Chang Yen, and Jia-Yu Chen
2641	Relationship among Market Value Added, Cash Value Added, and Corporate Governance: A Case of Taiwan during 2011–2012 Mao-Chang Wang
2649	Testing Behavior of the Mean Inactivity Time M. Kayid and S. Izadkhah
2654	Interval Estimation of Quantile Difference in the Two-Parameter Exponential Distributions Ayman Baklizi
2661	Production of <i>Garcinia gummi-gutta</i> Methyl Ester (GGME) as a Potential Alternative Feedstock for Existing Unmodified DI Diesel Engine: Combustion, Performance, and Emission Characteristics Subramani Lingesan, K. Annamalai, M. Parthasarathy, Krishna Moorthy Ramalingam, B. Dhinesh, and J. Isaac JoshuaRamesh Lalvani
2679	Characteristic Analysis of Welding Crack Acoustic Emission Signals Using Synchrosqueezed Wavelet Transform Kuanfang He, Qi Li, and Qing Yang
2692	Combined Effect of Heat Storage, Reflective Material, and Additional Heat Source on the Productivity of a Solar Still—Techno-Economic Approach D. Dsilva Winfred Rufuss, S. Iniyan, and L. Suganthi
REVIEW PAPER	
2707	MRI Images Segmentation and 3D Reconstruction for Cerebral Cancer Detection Nadia Smaoui Zghal and Nabil Derbel
TECHNICAL NOTE	
2718	Effect of Sample Reconstitution Methods on the Behaviors of Granular Materials under Shearing Yao Li, Yunming Yang, Hai-Sui Yu, and Gethin Roberts
2726	Table of Contents to Volume 46
2734	Index to Volume 46

Journal of Testing and Evaluation is online.

TAKE ADVANTAGE OF THESE BENEFITS:

Search Papers and Authors View Abstracts View Table of Contents Download Individual Papers IP access is available

For information, visit: www.astm.org