

TESTING FORUM

D-18 News

Call for Papers

A call for papers is issued for a symposium on Physico Chemical Aspects of Soil, Rock, and Related Materials, sponsored by ASTM Subcommittee D18.06 on the Physico Chemical Properties of Soil. The symposium will be held 29-30 June 1989 in St. Louis, MO, in conjunction with the June meetings of Committee D-18 on Soil and Rock.

The objectives of this symposium are to present the state of the art methodologies on:

- Methods of chemical analysis for inorganic parameters in soil.
- Methods of chemical analysis for organic parameters in soil.
- Measurement of changes in the soil physical properties or behavior as affected by changes in the chemical or mineral constituents of the soil.
- Changes in soil properties as affected by soil pretreatments.
- In-situ chemical testing of soil.

Papers are solicited that will generate discussion on these objectives.

It is anticipated that the papers selected for presentation (15 to 20-min duration) will be given in four 4-h sessions. Each session will also include an informal poster session presentation.

The symposium will be organized into sessions concerning the topics outlined in the objectives. Prospective authors are invited to submit a title, a 300-500 word abstract, and the ASTM Paper Submittal Form below by 1 July 1988 to Theresa Smoot, ASTM, 1916 Race Street, Philadelphia, PA 19103, 215/299-5413. Additional forms are available from the symposium chairmen: Alan Lutenege, Associate Professor, Geotechnical Engineering, Clarkson University, Potsdam, New York 13676, 315/268-6519; Keith Hodginott, U.S. Army Environmental Hygiene Agency, HSHB-ME-SE, Aberdeen Proving Grounds, MD 21010-5422, 301/671-3310; or Robert Lamb, Department of Civil Engineering, Kansas State University, Manhattan, KS 66506, 913/532-5862.

A *Special Technical Publication* (STP) based on the symposium proceedings is anticipated by ASTM. The deadline for all manuscripts is 1 March 1989. Papers will be accepted for consideration for inclusion in the anticipated STP even if presentation at the symposium is not possible. Main authors will receive a complimentary copy of the volume(s) containing their papers. The main author is the author corresponding with the ASTM publication staff. All published authors may purchase reprints of the papers at cost. Paper submission deadline for the STP will be rigidly enforced. All papers not submitted to ASTM by the deadline will not be accepted for the STP. If a paper is submitted after the deadline, it may be forwarded to the appropriate ASTM journal to be considered for publication. Please contact Theresa Smoot or a symposium chairman if you cannot meet the deadline.

Symposium on Nondestructive Testing of Pavements and Backcalculation of Moduli

The First International Symposium on Nondestructive Testing of Pavements and Backcalculation of Moduli sponsored by ASTM Committee D-18 on Soil Rock will be held 29-30 June 1988 in Baltimore, MD, in conjunction with the June meetings of Committees D-18 and D-4.

The program for the symposium is as follows:

Wednesday 29 June 1988

Session I: Paper Presentation, Dr. Baladi, Moderator

- 8:00 a.m.: Opening Remarks and Welcome, Co-Chairman Baladi
- 8:15 a.m.: State of the Art Paper on Correlation Between Non-destructive Testing Devices, Professor Bob Lytton
- 9:15 a.m.: Twenty Years of Nondestructive Testing and Backcalculation of Moduli for Pavements in Argentina, J. Tonsticorelli, Rosario, Argentina
- 9:30 a.m.: Nondestructive Testing Techniques and Evaluation Procedures for Airfield Pavements, D. R. Alexander, S. D. Kohn, P. A. Heath, USAE Waterways Experiment Station, Vicksburg, MI
- 9:45 a.m.: Measuring Pavement Deflections Near a Super-Heavy Overload, W. Nokes, Department of Transportation, Sacramento, CA
- 10:00 a.m.: Coffee Break
- 10:15 a.m.: FWD Backcalculated Moduli Comparison with Pavement Pressuremeter and Cyclic Triaxial Moduli, P. J. Cosentino, J. L. Briau, Texas A&M University, Lubbock, TX
- 10:30 a.m.: A Data Base Method for Backcalculation of Composite Pavement Layer Moduli, M. Anderson, University of Kentucky, Vicksburg, MI
- 10:45 a.m.: Pavement Deflection Measuring Equipment: Side-by-Side Testing and Evaluation, W. Uddin, W. R. Hudson, University of Texas, Austin, TX, K. T. Benson, and G. E. Elkins, ARE, Inc., Austin, TX
- 11:00 a.m.: Experience with Nondestructive Testing of Two Instrumented Airfield Pavements, G. V. Ganapathy, Transport Canada, Winnipeg, Canada
- 11:15 a.m.: Influence of Source and Receiver Geometry on the Testing of Pavements by the Surface Waves Method, D. R. Hiltunen and R. D. Woods, University of Michigan, Ann Arbor, MI
- 11:30 a.m.: Nondestructive Evaluation of Pavements Using Surface Wave Method, S. Nazarian, University of Texas, Austin, TX
- 11:45 a.m.: Application of Optimization Techniques in Surface Wave Analysis for Backcalculation of Pavement Moduli, M. Makbul Hossain, and V. P. Drnevich, University of Kentucky, Lexington, KY

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12:00 noon: Lunch

Session I: Poster Presentation (1:00 to 2:00 p.m.)

The Use of NDT in Design and Construction of Airport and Highway Pavement Systems, J. Greenstein, L. Berger, Louis Berger International, Inc., East Orange, NJ

Using NDT to Calculate 1986 AASHTO Guide Subgrade Effective Resilient Modulus, J. K. Lindly and T. D. White, University of Alabama, Tuscaloosa, AL

Use of Nondestructive Deflection Testing Data in Development of Pavement Performance Prediction Models, J. B. Rauhut, N. F. Hawks, Brent RauHut Engineering, Inc., San Antonio, TX

Planning and Implementation of Nondestructive Pavement Testing—Is It Really That, N. D. Pumphrey, J. K. Lindly, T. D. White, University of Alabama, Tuscaloosa, AL

ILLI-Pave Based NDT Analysis Procedures, M. R. Thompson, University of Illinois, Urbana, IL

The Volumetric K. Value for Analysis of Rigid Pavements, S. D. Kohn, D. R. Alexander, G. R. Rada, Soil and Materials Engineers, Inc., Livonia, MI

Evaluation of Layers' Moduli Backcalculation Programs for Low Volume Roads, K. M. Chua, Texas A&M University, College Station, TX

Backcalculation of Layer Moduli From Nondestructive Pavement Deflection Data Using an Expert System Approach, Y. J. Chou, J. Uzan, R. L. Lytton, Texas A&M University, College Station, TX

Backcalculation of Layer Moduli Using Falling Weight Deflectometer Data, R. Buiter, Public Works Dept., Delft, The Netherlands

Development of DBCONPAS Computer Program for Estimation of Concrete Pavement Parameters from FWD Data, M. Tia, University of Florida, Gainesville, FL

Prediction of Flexible Pavement Layer Moduli From Dynaflect and FWD Deflections, K. Badu-Tweneboah, B. Ruth, M. Tia, University of Florida, Gainesville, FL, W. G. Miley, Florida Dept. of Transportation, Gainesville, FL

A Mechanistic Method for Evaluation of Layer Moduli and Overlay Design, N. P. Khosla, N. A. Ali, North Carolina State University, Raleigh, NC

Elastic Parameter Estimates of Pavement Structure Layers and Uniqueness, D. Stolle, McMaster University, Hamilton, Ontario, Canada, D. Hein, John Emery Geotechnical Engineering Ltd., Downsview, Ontario, Canada

2:00–5:00 p.m.: Workshop Number 1, Measurements of Pavement Deflection Using Several NDT Devices (Parking Lot)

Thursday, 30 June 1988

Session II: Paper Presentation, Al Bush, Moderator

8:00 a.m.: Opening Remarks, Co-Chairman Bush

8:15 a.m.: State of the Art Paper on Reliability Testing of Seven Nondestructive Pavement Testing Devices, R. A. Bentsen and A. J. Harrison, USAE Waterways Experiment Station, Vicksburg, MS

9:15 a.m.: The Importance of Deflection Reading Accuracy in Backcalculation of Pavement Layer Moduli and Overlay Design, R. N. Stubstad, Dynatest Consulting, Inc., Ojai, California, N. F. Coetzee, University of Alaska, Fairbanks, Alaska, and P. Ulidtz, Technical Univ. of Denmark, Denmark

9:30 a.m.: The Use of Falling Weight Deflectometer Data in Monitoring Flexible Pavement Systems, D. E. Newcomb, J. P. Mahoney, N. C. Jackson, S. W. Lee, University of Nevada-Reno, Reno, NV

9:45 a.m.: Development of Analytical/Empirical Performance Parameters for the Structural Evaluation of Asphalt Pavements, C.A.P.M. Van Gurp, Delft University of Technology, Delft, The Netherlands

10:00–10:15 a.m. Coffee Break

10:15 a.m.: Temperature, Frequency, and Load Level Correction Factors for Backcalculated Moduli Values, F. P. Germann, and R. L. Lytton, Texas Transportation Institute, College Station, TX

10:30 a.m.: Illi-Slab and the Deflection Basin: Keys to Characterizing Rigid Pavement Performance, P. T. Foxworthy, M. I. Darter, Air Force Weapons Laboratory, Albuquerque, NM

10:45 a.m.: A Performance Comparison of Selected State-of-the-Art Backcalculation Computer Programs, N. F. Coetzee, University of Alaska, Fairbanks, AL, J. P. Mahoney, University of Nevada, Reno, NE, R. N. Stubstad, Dynatest Consulting, Inc., Ojai, CA

11:00 a.m.: Using the Multidepth Deflectometer to Verify Modulus Backcalculation Procedures, T. Scullion, F. P. Germann, and R. L. Lytton, Texas Transportation Institute, College Station, TX

11:15 a.m.: Backcalculation of Moduli in Thawing Pavement Structures, V. C. Janoo, R. Berg, Department of Defense, Hanover, NH

11:30 a.m.: A Competent Multilayer Solution and Backcalculation Procedure for Personal Computers, F. J. VanCauwelaert, Dept. of Civil Engineering, Isich, Belgium, W. J. Barker, D. Alexander, USAE Waterways Experiment Station, Vicksburg, MS, T. D. White, Purdue University, Lafayette, IN

11:45 a.m.: General Procedure for Backcalculating Layer Moduli, J. Uzan, R. L. Lytton, and F. Germann, Texas Transportation Institute, College Station, TX

12:00 noon: Lunch

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Session II: *Poster Presentation (1:00 to 2:00 p.m.)*

Stress Dependency of the (SAND) Subgrade Modulus by the Dead Weight of the Pavement Layers, A. C. Pronk, Technical-Scientific Bureau, Delft, The Netherlands

The Multi-Depth Deflectometer System for Determining the Effective Moduli of Pavement Layers, E. Horak, M. DeBeer, A. T. Visser, Division for Roads and Transport Technology, Pretoria, South Africa

Backcalculation of Pavement Layer Moduli from Falling Weight Deflectometer Data on Rigid and Composite Pavements, N. D. Pumphrey, T. D. White, University of Alabama, Tuscaloosa, AL

Reliability Testing of Seven Nondestructive Pavement Testing Devices, R. A. Bentsen, J. A. Harrison, USAE Waterways Experiment Station, Vicksburg, MS

New-Developed Resilient Modulus Testing System for Pavement Thickness Design in Taiwan, D. Ta Teh Chang, C. En Chiang, Chung Yuan University, Chungli, Taiwan

Airport Pavement Evaluation Using Deflection Testing Coupled with Ground Penetration Radar, F. B. Holt, R. A. Eckrose, Eckrose/Green Associates, Inc., Madison, WI

Application of Ground Penetrating Radar and Infrared Thermography to Pavement Evaluation, F. B. Holt, R. A. Eckrose, Eckrose/Green Associates, Inc., Madison, WI

A Rapid Evaluation of Concrete Pavement Using Ground Penetrating Radar, S. S. Kuo, University of Central Florida, Orlando, FL

Semi-Rigid Pavements: A Dead Loss for Backcalculation Procedures Using Deflection Bowls, A. C. Pronk, Technical-Scientific Bureau, Delft, The Netherlands

SASWOPR, A Program to Operate on Spectral Analysis of Surface Wave Data, M. Sayyedsadr, V. P. Drnevich, University of Kentucky, Lexington, KY

On Dispersion Computations Used to Evaluate Layer Properties, R. A. Douglas, J. L. Eddy, H. E. Wahls, North Carolina State University, Raleigh, NC

USAF Propagation NDT Method, M. C. Wang, Pennsylvania State University, University Park, Pennsylvania, W. Schauz, J. Amend, AFESC, Tyndall Air Force Base, FL

Comparison of Two Falling Weight Deflectometer Devices, Dynatest 8002 and TMFWD 8714, M. Y. Shahin, J. A. Croveti, B. Touma, ERES International, Inc., Savoy, IL

Back-Analyzed Elastic Stiffness: Comparison Between Different Evaluation Procedures, W. S. Tam, S. F. Brown, SWK Pavement Engineering, Nottingham, United Kingdom

A Simple Method of Measuring Pavement Rebound Deflection Bowl Data and Calculating Moduli, A. S. Rajagopal, C. E. G. Justo, Bangalore University, Bangalore, India

2:00-4:00 p.m. Workshop II: Backcalculation of Layer Moduli Using Several Microcomputer Programs and the Collected Data from Workshop I

4:00-5:00 p.m.: Summary and Closing Remarks

Second International Conference on Geomechanics in Tropical Soils

12-14, Dec. 1988, Singapore

Prof. G. E. Blight of the University of Watersrand, South Africa, will deliver the keynote address on Construction in Tropical Soils, and *Dr. P. R. Vaughan* of the Imperial College of Science and Technology, United Kingdom, will also deliver a keynote address on Engineering Properties of Tropical Soils. Seventy-eight abstracts of papers from 22 countries (Australia, Brasil, China, Egypt, Ghana, Hong Kong, Indonesia, India, Jordan, Japan, Kenya, Mozambique, New Zealand, Nigeria, Portugal, Singapore, Taiwan, The Netherlands, Thailand, United Kingdom, Venezuela and Switzerland) were accepted. The Conference Hotel is the Mandarin, Orchard Road, Singapore.

Other Conference events include, spouse program and post conference tours to Kuala Lumpur and Jakarta. Details are available from the Conference Secretariat (150 Orchard Road 07-14, Orchard Plaza, Singapore 0923; telephone 7332922; Telex RS 35377; Fax 3448869). Early registrations are encouraged.

USA to be SITE for IAHS Third Scientific Assembly

The International Association of Hydrologic Sciences (IAHS) is sponsoring its Third Scientific Assembly (ITSA) in the United States. The Assembly will consist of a series of symposia held during 11-19 May 1989 at Baltimore, MD. The past two TSAs were held in Exeter, England, in 1982 and Budapest, Hungary, in 1986. ITSA registration will start 10 May. Sessions on 11-12 May will be jointly sponsored by IAHS and the American Geophysical Union, the latter which will be holding their annual spring meeting at the same location 8-12 May.

The program will consist of eight interesting symposia covering essentially all phases of the hydrologic cycle, with concurrent hands-on computer workshops on a variety of hydrologic modeling programs. Symposia are expected to include the following topics: (1) Atmospheric Deposition (that is, acid precipitation and radioactive particulate matter), jointly with IAMAP; (2) Systems Analysis in Water Resources—Closing the Gap Between Theory and Practice; (3) Surface Water Modeling—New Directions for Hydrologic Prediction; (4) Regional Characterization of Water Quality; (5) Stochastic Processes and Time Series Analysis in Glaciology; (6) Sediment and Environmental Effects, (7) Ground-Water Contamination; and (8) Remote Sensing and Large-Scale Global Processes. Commission meetings and special tours also will be arranged. A proceedings of each symposium will be published.

TESTING FORUM

Subcommittee Spot Light

Subcommittee Officer Changes

- D18.15 Wayne Adaska Chairman, Mehmet Anday Vice-Chairman.
- D18.08 Keith Rademaker Chairman, Jim Talbot Vice-Chairman.

Chairman Shockley has rearranged the assignment of subcommittees to the newly elected vice-chairmen as follows:

Vice-Chairman Howard Pincus:

- D18.02, Sampling and Related Tests
- D18.11, Deep Foundations
- D18.12, Rock Mechanics
- D18.17, Rock for Erosion Control.
- D18.19, Frozen Soil and Rock

To Be Assigned

- D18.03, Texture and Plasticity
- D18.06, Physical Chemical Properties
- D18.07, Identification and Classification
- D18.13, Marine Geotechnics
- D18.18, Peats and Organic Soils

Vice-Chairman Richard S. Ladd:

- D18.01, Surface and Subsurface Reconnaissance
- D18.04, Ground Water Movement and Hydrologic Properties
- D18.14, Waste Management
- D18.20, Hydraulic Barriers
- D18.21, Ground Water Monitoring

Vice-Chairman Jim Talbot:

- D18.05, Structural Properties
- D18.08, Construction Control Tests
- D18.09, Dynamic Properties
- D18.10, Bearing Tests
- D18.15, Stabilization with Admixtures
- D18.16, Grouting

First Vice-Chairman Richard Gray continues with all of the administrative subcommittees.

New Subcommittee Formed

The Executive Subcommittee created ASTM D18.80 on planning at its 27 Jan. 1988 meeting in Albuquerque, NM. The scope and operating procedures of the committee are as follows:

Scope

It shall be the responsibility of the Subcommittee on Planning to advise the Executive Subcommittee on all matters pertaining to planning for Committee D-18. Approval and implementation of the plans developed by the Subcommittee on Planning shall be the responsibility of the Executive Subcommittee.

Statement for the Committee D-18 Procedures Guide

The Subcommittee on Planning will consist of (1) the First Vice-Chairman, (2) the immediate past-Chairman, and (3) a Member-at-large of the Executive Subcommittee selected by the Chairman. A written plan shall be prepared, which will be reviewed yearly and updated at least every three years. The plan will anticipate the changing needs for standardization, identify opportunities and problems with respect to the operation of Committee D-18, and recommend direction of the Committee's resources toward achievement of desired results. Suggestions for planning will be solicited yearly from all subcommittees of D-18. At the direction and discretion of the Chairman of Committee D-18, but at least once every two years, the Subcommittee on Planning will prepare a written report documenting the progress being made in achieving the goals put forth in the D-18 plan.

Future D-18 Committee Meetings and Approved Symposia

13-15 June 1988

University of Minn., Minneapolis, MN

D-18 Cooperation with 29th National Symposium on Rock Mechanics

Meeting: 26-30 June 1988

Stouffer's Harbor Place Hotel, Baltimore, MD

D18.10/D04.39 Symposium on Non-Destructive Testing of Pavements (2 days)

Oct. 1988

Separate Symposium at AEG Meeting

Kansas City, MO

D18.01 w/others: Remote Sensing for Geotechnical Engineering

Meeting: 22-27 Jan. 1989

Walt Disney World Hilton, Orlando, FL

D18.13 Symposium on Geotechnical Aspects of Ocean Waste Disposal (2 days)

Meeting: 25-29 June 1989

St. Louis, MO

D18.06 Symposium on Physico-Chemical Aspects of Soil, Rock & Related Materials

D18.01 Symposium on Geophysical Methods for Geotechnical Investigations

Meeting: 21-26 Jan. 1990

Las Vegas, NV

D18.11 Symposium on Design and Testing of Rock and Soil Anchors

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Meeting: June 1990

San Francisco, CA
D18.14 Symposium on Geotechnical Behavior and Properties of Waste Materials

Other Meetings of Interest

22-28 August 1988
Anaheim, CA
International Symposium on Artificial Recharging of Ground Water

Dec. 1988
New Delhi, India
International Symposium on Mining Subsidence (ISSMFE)

9-13 Jan. 1989, WA, DC
68th Annual Meeting of TRB

10-19 May 1989
Baltimore, MD
IAHS 3rd Scientific Assembly (Includes Intern'l Symposia on (1) Ground Water Contamination and (2) Remote Sensing)

15-19 Jan. 1990
Washington, DC
69th Annual Meeting of TRB

Awards

William T. Cavanaugh Award

The first William T. Cavanaugh Memorial Award was presented to Ivan Johnson on 25 Jan. 1988, by Mr. Wayne France, chairman of ASTM. This new highest award of ASTM requires unanimous Approval of the Board of Directors and carries with it Honorary ASTM Membership. The following summary of Mr. France's remarks excerpted from the D-18 main committee minutes gives some background of the award and some of the highlights of Ivan's many years of devotion to the standardization process both inside and outside ASTM.

Summary of Remarks by Mr. France—Today we present the first William T. Cavanaugh Memorial Award. This award was been established during 1987 by the Board of Directors in recognition of William Cavanaugh who served as President of ASTM from 1970 to 1985. The award is to recognize someone with wide eminence in the area of voluntary standards. We are fortunate today to make the first presentation of this award. The individual selected for the award is D-18 member, Ivan Johnson, who has had nearly 25 years of dedicated service in ASTM in the area of voluntary consensus standards. Through his work with the U.S. Geological Survey, he participated in the establishment and operation of the National Hydrological Laboratory, and in addition, the National Water Resources Training Center, an activity which has had at least a thousand participants, some 400 from beyond our borders. In addition, Ivan has been extremely active in Committee D-18. He was Chairman of D-18 for 6 years, and has participated in a variety of other activities of D-18, including symposia, standards technology training, and the preparation of STPs. In addition, and very important as a part of this memorial award, are his activities beyond ASTM in the world of standardization. I'll highlight three from his extensive biography which was submitted to the ASTM Board of Directors for their consideration. (I might point out that this award requires the unanimous approval of the Board of Directors.)

(1) The first activity that I will mention is Ivan's work with UNESCO, United Nations Educational Scientific and Cultural Organization, where he participated in the development of the Glossary of Hydrological Terms; (2) his work with the International Society of Soil Mechanics, in which he has been active in since 1962; and (3) his work in the International Association of Hydrological Sciences where he served as president, during his participation beginning in 1963. It is indeed a pleasure to recognize Ivan's contributions not only to ASTM, but to the worldwide standards organizations, the activities of standardization internationally. This is a very important contribution, and we can be proud that Ivan comes to us from Committee D-18.

Mr. France then presented the award with the following citation:

"Arnold Ivan Johnson has been elected to received the William T. Cavanaugh Memorial Award for Outstanding Leadership in the development of interdisciplinary and voluntary consensus standards in terminology, mensuration, test methods, and practices and promotion of their use. Conferred by action of the Board of Directors."

TESTING FORUM



Robert C. Deen

ASTM and the engineering profession suffered a great loss with the sudden death of Bob Deen on March 26th. He was 57 and the cause of death was a massive heart attack.

Bob received his B.S. and M.S. degrees in civil engineering at the University of Kentucky and his Ph.D. degree in civil engineering at Purdue. In addition, he received a law degree from the Uni-

versity of Kentucky in 1981. He was a member of the Triangle Fraternity.

At the time of his death he was the director of the Kentucky Transportation Research Program of the College of Engineering at the University of Kentucky. He also was an adjunct associate professor of Civil Engineering at the University. His previous work experience included: Research Engineer and Assistant Director of the Kentucky Department of Transportation, Division of Research; Research Engineer in the School of Civil Engineering at Purdue University; and Lieutenant U.S. Air Force.

Bob Deen was extremely active in technical and professional societies on both the local and national levels and had many leadership positions. The organizations included: American Society of Civil Engineers, ASTM, National Society of Professional Engineers, Kentucky Society of Professional Engineers, Institute of Transportation Engineers, Transportation Research Board, and The International Society for Soil Mechanics and Foundation Engineering. In ASTM, he was active in Committees D-4 on Road and Paving Materials and D-18 on Soil and Rock. In Committee D-18, he was First Vice-Chairman. He was the immediate past chairman of ASTM's Committee on Publications.

Bob Deen also was quite active in civic affairs (Rotary Club, Girl Scout Council, Board of Education, United Way, United Campus Ministry, Voluntary Action Center) and church activities (elder, choir president, executive committee member, and department chairman of Central Christian Church).

He is survived by his wife Flonnia Carol, a sister, Clara Elizabeth Warren, and two daughters, Diana and Carolyn Deen Hoagland. The ASTM community is grateful for the contributions and service of Bob Deen and shares with the family the sorrow associated with the loss of a great person.

ASTM Committee D-18 on Soil and Rock

Scope

The promotion of knowledge; stimulation of research; the development of specifications and methods for sampling and testing; and the development of nomenclature, definitions, and practices relating to the properties and behavior of soil, rock, and the fluids contained therein. Excluded are the uses of rock for building stone and for constituent materials in portland cement and bituminous paving and structures coming under the jurisdiction of other committees. Included are the properties and behavior of: (1) soil-like materials such as peats and related organic materials, (2) geotextiles, and (3) fluids occupying the pore spaces, fissures, and other voids in soil and rock insofar as such fluids may influence the properties, behavior, and uses of the soil and rock materials.

Officers

Chairman: W. G. Shockley, 326 Lake Hill Dr., Vicksburg, MS 39180.

First Vice-Chairman: R. E. Gray, GAI Consultants, 570 Beatty Rd., Monroeville, PA 15146.

Vice-Chairman: Robert C. Deen, University of Kentucky, Kentucky Transportation Research Program, Transportation Research Bldg., Lexington, KY 40506 (see Testing Forum).

Vice-Chairman: P. M. Jarrett, Royal Military College, Department of Engineering, Kingston, Ontario, Canada K7L 2W3.

Vice-Chairman: H. J. Pincus, University of Wisconsin—Milwaukee, Department of Geological Sciences, Sabin Hall, Milwaukee, WI 53201.

Vice-Chairman: R. S. Ladd, Woodward-Clyde Consultants, 1425 Broad St., Clifton, NJ 07012.

Secretary: R. J. Stephenson, U.S. Army Corps of Engineers, South Atlantic Division Lab., 611 S. Cobb Dr., Marietta, GA 30060.

Membership Secretary: H. F. Hanson, Los Angeles City, Department of Water and Power, P.O. Box 111, (510 E. Second St.), Los Angeles, CA 90051.

Subcommittees and Their Chairmen

TECHNICAL

D18.01 Surface and Subsurface Reconnaissance

C. B. Petterson

D18.02 Sampling and Related Field Testing for Soil Investigations

R. E. Brown

D18.03 Texture, Plasticity, and Density Characteristics of Soils

T. S. Hawk

D18.04 Hydrologic Properties of Soil and Rock

D. E. Daniels

D18.05 Structural Properties of Soils

R. T. Donaghe

D18.06 Physico-Chemical Properties of Soils and Rocks

K. Hoddinott

D18.07 Identification and Classification of Soils

A. K. Howard

D18.08 Special and Construction Control Tests

J. R. Talbot

D18.09 Dynamic Properties of Soils

R. L. Ebelhar

D18.10 Bearing Tests of Soils in Place

G. Y. Baladi

D18.11 Deep Foundations

E. T. Mosley

D18.12 Rock Mechanics

W. G. Austin

D18.13 Marine Geotechnics

R. C. Chaney

D18.14 Geotechnics of Waste Management

G. D. Knowles

D18.15 Stabilization by Additives

M. C. Anday

D18.16 Chemical Grouting

R. H. Karol

D18.17 Rock for Erosion Control

C. H. McElroy

D18.18 Peats and Organic Soils

A. L. Burwash

D18.19 Frozen Soil and Rock

C. W. Lovell

D18.20 Impermeable Barriers

N. J. Cavalli

D18.21 Ground Water Monitoring

D. M. Nelson

ADMINISTRATIVE

D18.91 Editorial

G. N. Durham

D18.92 Geotechnical Testing Journal

V. P. Drnevich

D18.93 Terminology for Soil, Rock, and Contained Fluids

A. I. Johnson

D18.94 Education and Training

J. D. Antrim

D18.95 Information Retrieval and Data Automation

W. A. Marr

D18.96 Research Steering and Standards Development

Adrian Pelzner

D18.97 Awards

R. G. Packard

D18.98 Hogentogler Award

R. E. Gray

D18.99 Quality Control

P. A. Spellerberg