

Subject Index

A

Accelerometers, 380
 Aircraft pavement, 233, 251
 Analysis of variance, 125
 Annular loading, 309
 Asphalt concrete, 3, 170
 Asphalt layer moduli, 309
 Asphalt overlaid concrete, 83
 Asphalt pavements, 233
 ASTM standard, deflection, 505

B

Base thickness, 343
 BISDEF, 203
 Bulk modulus model, 3

C

California Bearing Ratio, 251
 Coefficient of dowel/concrete interaction, 440
 COLIBRI, 277
 Composite pavement structures, 83
 Concrete pavement, 404, 473
 joints, 395
 slab on grade system, 103
 slabs, 440, 455
 Creep curve, 53
 Critical stress method, 404

D

Damping, 53
 Deflection analysis, 83, 143, 170, 203, 218
 ASTM standards for, 505
 effects on, 395
 support, 455
 surface, 440
 void measurement with, 488
 Deflection basins, 291
 theoretical, 68

Deflection transfer efficiency, 440
 Deflectometers, multidepth, 170
 Density, effect on strength, 251
 Dispersive methods, 277
 curves, Rayleigh waves, 380
 Dynamic analysis techniques, 3, 125
 Dynamic excitation, 53
 Dynamic linear technique, 3
 Dynamic nonlinear modulus, 3, 125

E

Elastic analyses, linear, 170
 Elastic joints, 404
 Elastic layer, 68, 505
 Elastic linear program, 326
 Elastic moduli, 53, 380, 404
 in situ test, 38
 Minnesota Road Research Project, 361
 Elastic stiffness, 218
 ELSDEF, 203
 ELSYM5, 309
 EVERCALC, 68

F

Falling weight deflectometer, 143, 170
 aircraft base, 251
 concrete pavement, 404
 elastic stiffness with, 218
 embankment tests, 361
 granular/subgrade
 characterization, 203
 jointed concrete slabs, 440, 455
 loading system, 326
 load transfer efficiency, 395
 material property, 53
 methodology verification, 159
 multilayer analysis, 125
 phase lag effects, 291
 slab-on-grade concrete, 103

FEACONS, 404
 FEAD, 218
 Filtering criteria, 380
 Finite element analysis, 125, 218, 326, 440
 FEACONS, 404
 Flexible pavement, 203, 233, 261, 326, 505
 Foundation moduli, 83
 Foundation support moduli, 103
 Foundation support value, 455
 FPEDD1/RPEDD1, 203
 Frequency domain, 159
 dynamic linear with, 3
 Frequency response curves, 159

G

Gauss-Newton method, 218
 Geophones, 395
 Gradient method, 68
 Ground penetrating radar equipment, 488
 Grout, 488

H

Heavy weight deflectometer, 233
 Horn antenna radar, 343

I

Impedance, 277
 Impulse loading equipment, 309
 Impulse response, 473

J

Joints, pavement, 395, 440

L

Layer interaction, 395
 Layered media, 159, 277
 Layered system, 261, 361
 analysis, 125, 277
 thickness measurement, 380
 Layered viscoelastic halfspaces, 53, 159
 LEAD, 218
 Linear methods, 3, 326
 Load, applied, 326

Load distributions, 309
 Load effects, truck, 170
 Loading, 251
 annular, 309
 assumptions versus actual, 125
 vertical circular, 380
 Load level choice, 233
 Load, peak, 291
 Load transfer efficiency, 395
 Long-Term Pavement Performance, 38

M

MICHBACK, 68
 Minnesota Road Research Project, 361
 MODCOMP2, 203
 Models, 125, 218
 annular loading, 309
 bulk modulus, 3
 layered viscoelastic halfspaces, 53
 pavement response, 143
 strain softening, 203
 MODULUS, 68, 203
 Modulus of elasticity, 53
 Moisture, 251
 Monte Carlo simulation technique, 261
 Multidepth deflectometers, 170

N

Newton method, 68
 Gauss-Newton method, 218
 Nonlinear elastic, static method, 3
 Nonlinear models, 125, 218
 Nonlinear response, 203, 233

O

Overburden, 218
 Overlays, 83
 design, 233
 thickness, 291

P

Peak load, 291
 Penetrometer soundings,
 dynamic cone, 361
 Phase lag, 291
 Plate sensor, 103
 Poisson's ratio, 261, 395
 Pore pressure, 218
 Portland cement concrete, 488
 Pressure distribution, 326
 Proof roller, 488

R

Radar, thickness evaluation, 343
 Rayleigh waves, 380
 Regression analysis, 125
 Remaining life, 261, 326, 488
 Resilient moduli, 203, 361
 Rigid pavement, 326, 473

S

Seismic methods, 380
 Shear strain attenuation curve,
 203
 Slab moduli, 83
 Slab-on-grade system, 103
 Spectral analysis of surface
 waves, 380
 Standards, ASTM, 505
 Static linear elastic technique, 3
 Stochastic analysis, 261

Strategic Highway Research
 Program, 3, 38, 103
 Strain softening models, 203
 Strains
 interfaces, 261
 laboratory versus in situ tests,
 361
 Strains, subgrade, 170, 203
 Stress analysis, critical, 404
 Stress sensitivity, effect on tests,
 233
 Structural capacity, 38
 Subbase support, 395, 404, 455,
 473, 488
 Subgrade reaction, 440
 Subgrade strains, 125, 170, 203,
 218, 361
 Surface deflection, 309, 440

T

Thickness
 layer, 68, 125, 380
 pavement, 343
 Time domain, 159
 dynamic linear with, 3
 Transient dynamic response
 equipment, 488

V

Voids
 determination, 473
 measuring, 488

W

Wave propagation, 277