

**RESUME**  
**Raj V. Siddharthan, Ph.D., P.E.**

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**Title: Professor of Civil Engineering**

**Personal Data**

Date of Birth: June 30, 1955  
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**Education**

1984 Ph.D. University of British Columbia, Canada  
1981 M.S. University of British Columbia, Canada  
1977 B.S. (Hons.), University of Sri Lanka, Sri Lanka

**Academic Experience**

1995 - Date Professor, Civil Engineering, University of Nevada, Reno

2007 Visiting Scholar, Lawrence Livermore National Security Laboratory, Livermore, CA

1989 - 1995 Associate Professor, Civil Engineering, University of Nevada, Reno (Tenured)

1992 Visiting Associate Professor, MIT (Sabbatical)

1984 - 1988 Assistant Professor, Civil Engineering, University of Nevada, Reno

1978 - 1984 Teaching Assistant, University of British Columbia, Canada

1977 - 1978 Assistant Lecturer, Civil Engineering, University of Sri Lanka, Peradeniya, Sri Lanka

**Registration**

Registered Professional Engineer (State of Nevada, # 10656)

**Research Citations**

His work has been cited by over 150 publications. For information visit Citation Index web site at: (Use key word(s): siddharthan r or siddharthan rv)  
<http://apps.isiknowledge.com/summary.do>

### **Non-Academic Experience**

1984-85 Research Associate, University of British Columbia

Involved in the following engineering projects:

- 1) Brenda Mines Extension - study for Klohn Leonoff Consultants, Ltd., Vancouver (1983)
- 2) Gravel Island Response Study - for ESSO Resources Canada, Ltd., and Komex Consultants, Ltd., Calgary (1982, 1984)
- 3) Pile Response Study for an Offshore Platform in Santa Barbara Channel - for Exxon, Houston (1983)
- 4) Response of Gas Pipelines to Waves and Earthquakes for British Columbia Hydro, Canada (1983, 1984)
- 5) Failure of Gas Pipeline in Fernley, Nevada - for GAB Corporation, Sacramento (1986)
- 6) Evaluation of Design Storm Wave Data for Beaufort Sea Structures - for Komex Consultants Ltd., Calgary (1987)
- 7) Evaluation of Seismic and Liquefaction Risk - for Pezonella Associates Inc. (1988)
- 8) Seismic Risk Study of Cyprus Mine Tailings Dam, Tonopah - for Welsh Engineers, Denver (1989)
- 9) Maui Runway Failure Mechanisms and Overlay Design -for Harding and Lawson Associates, Reno (1989)
- 10) Seismic Guidelines for Idaho Gold Mine Tailings Dam at Buffalo Gulch, Idaho - for Welsh and Associates, Colorado (1990)
- 11) Seismic Design and Analysis of Mine Tailings Dam, Phase II Tonopah - for Dr. Dirk van Zyl of EIC Consultants, Colorado (1991)
- 12) Foundation Details of SIIS Building, Carson City - for Lumos Associates (1991)
- 13) Development of Tailings Disposal System and Dynamic Analysis: Magma Robinson Project, Ely, Nevada - for Welsh Engineers, Reno (1991)
- 14) Liquefaction Studies at a site located South of Reno - for Harding and Lawson Associates, Reno (1991)
- 15) Conceptual and Seismic Stability Design of Tailings Dam at Bullfrog Mines at Beatty, Nevada - for Golder Associates, Colorado (1992)
- 16) Seismic Liquefaction and Amplification Analysis of Three Sites using DESRA2- for Pacific Engineering Analysis (EPRI) --(1993)
- 17) Stability Problems at Magma Mines, Ely -for WESTEC (1993)
- 18) Development of Tailings Dam Systems, Magma Mines in Ely: Phase II - for WESTEC (1994)
- 19) Development of Site-Specific Response Spectra for I-15/US-95 Interchange, Las Vegas- for SEA Engineers (1994)
- 20) Investigation of Foundation and Structural Options for Bently Nevada Corporation, Minden (1995)
- 21) Seismic Foundation Analysis for Nugget Tower for Nortec Engineers, Reno (1995)
- 22) Behavior of Approach Fills Under Seismic Loading for Harding and Lawson Associates (1996)
- 23) Stability Design of Flood Control Levees for Nortec Engineers, Reno (1998)
- 24) Bently Nevada Training Facility Foundation Design Issues for Bently Nevada Corporation, Minden (1998)
- 25) Amplification and Liquefaction Studies at Washoe Valley Bridge Site and at Fallon Site for Lumos and Associates, Carson City, Nevada (1999)
- 26) Amplification and Liquefaction Studies at Water Pump Site for Stantec, Sparks, Nevada (1999, 2000)
- 27) Seismic Issues at Grasburg Mine, Irian Jaya for CNI Consultants, Tuscon, Arizona (2000)
- 28) Fender Testing Under Dynamic Loads for Maritime International Inc., Louisiana (2001& 2002)

- 29) Seismic Vulnerability of a Building in Downtown San Francisco for Bently Holdings Corporation, San Francisco, CA (2002)
- 30) Development of Deep Soil Mix Analysis Program for FHWA/SALUT Inc., Washington D.C. (2003, 2004, 2005)
- 31) Assessment Las Vegas Valley Responses from Nuclear Blasts for Lawrence Livermore National Laboratory (2003, 2004)
- 32) Forensic Investigation of the Failures at Innsbrook Complex for Freeman, D' Aiuto. Pierce, Gurev, Keeling, and Wolf, Stockton, CA (2004)
- 33) Seismic Vulnerability Investigation of Verrazano-Narrows Bridge Approaches (Brooklyn and Staten Island) for Weidlinger Associates, New York (2004, 2005)
- 34) Seismic and Stability Investigation for Wood Rogers (2004, 2005)
- 35) Foundation Design for South Reno Water Treatment Facility for Wood Rodgers/Corollo Engineers, CA (2005, 2006)
- 36) Seismic Vulnerability at two MSE Walls sit at Lake Tahoe for Sunrise Engineering, Idaho (2006)
- 37) Design and Construction of a Dam in Lake Tahoe for Nortec Inc., Reno (2006)
- 38) Response Spectra Development at – Green Valley High School for Summit Engineering, Las Vegas (2007)
- 39) Soil Type –F Spectra Analysis (Clay/Sand) for Stantec Engineering, Reno (2007)
- 40) Fernley Floods Investigation and Failure Analysis for Robert Maddox and Associates (2008)

### Professional Societies

American Society of Civil Engineers - Member  
 Member of the ASCE Committee on Computer Applications and Numerical Methods  
 Member of the ASCE Committee on Shock and Vibratory Effects (1986-88)  
 Member of Earthquake Engineering Research Institute  
 Member of ASCE, Reno Chapter  
 Member of U.S. Universities Council on Geotechnical Engineering Research  
 Member of the ASCE Committee on Soil Dynamics  
 Member of the International Society of Numerical & Analytical Methods

### Awards

1979 - 1984 University of British Columbia Graduate Fellowship  
 1979 - 1984 Both M.S. and Ph.D. thesis work were sponsored by Exxon, Houston and Ertec Western Inc., California  
 1985 Junior Faculty Research Award, University of Nevada, Reno  
 1985 - 1986 Engineering Research Initiation Grant, Engineering Foundation (only 8 awards were made nationwide in all engineering fields)  
 1992 Visiting Research Associate Professor at MIT  
 1993 - Member of  $\beta$ -Testing of the PACE Software being developed by the Shell Oil Co and SWK Engineering.  
 1996 1996 EERI Student Research Paper Competition Award was presented to Mahmoud EL- Gamal. His paper was based on his Ph.D. work carried out under my supervision.  
 1997 1997 Shamsheer Prakash Foundation Citation for work on Dynamic Soil Structure Interaction and Stability of Retaining Structures under Earthquakes.

### Short Courses

Principal Organizer and one of the instructors of a short course entitled: "Design and Construction of

Tailing Dams,” March 23- 24, 1989, Reno. (with Dr. Dirk Van Zyl and Mike Henderson)

Principal Organizer and the instructor of a short course on “Liquefaction Procedures and Analysis of Tailings Dams,” Feb. 9, 1991, Reno.

Instructor at the short course on “Geological Hazard: Seismic Issues,” Organized by the Association of Engineering Geologists, Reno, March 1994, Organized by the Technology Transfer Center, University of Nevada, Reno, April 29 - May 3, 1996.

An instructor of a short course on “Seismic Design Issues: Highway Bridges,” Organized by the UC Davis Extension, April 10 - May 15 (Wednesdays), 1996.

An instructor of a short course on “Deep Mixing Workshop and Symposium,” GeoTrans 2004, Los Angeles, July 27-31, 2004.

Principal Organizer and the instructor of a short course on “Near-Surface Soil Characterization and IBC 2003,” Sept. 13, 2004, Las Vegas and Sept. 29, 2004 in Reno.

#### **National Committee and Review Assignments:**

Reviewer for ASCE Journal of Structural Engineering; ASCE Foundation Engineering Congress 1989; ASCE Journal of Transportation Engineering; Bulletin of the Seismological Society of America; The National Science Foundation; ASCE Geotechnical Congress 1991; Annual ASCE Convention, Orlando, Florida, 1991; ASCE Journal of Geotechnical Engineering; International Conference on Geotechnical Earthquake Engineering, 1995; Journal Numerical & Analytical Methods in Geomechanics; Journal of Earthquake Engineering and Structural Dynamics; ASCE Journal of Bridge Engineering; A peer-review panel member of the US Army Corps Document EC-1110-2-6050; Organizer of two ASCE Technical Sessions - 1995; Reviewer for the Sixth National Conference on Earthquake Engineering and International Conference on Soil Dynamics and Earthquake Engineering-1998; Organizer of three technical sessions at GeoTrans 2004.

#### **Current Research Interests**

Soil response under static and dynamic loading including liquefaction behavior, dynamic behavior of rigid and flexible retaining walls, analytical models to predict centrifuge model behavior, dynamic pavement response to traffic and moving load effects, pavement materials characterization, effects of blast loading on saturated medium, wave loading on offshore slopes.

#### **Research Grants**

“Dynamic Effective Stress Response of Surface Footings in Sand,” Junior Faculty Award, University of Nevada Reno, June 1, 1985 to August 31, 1985, \$4,213. (PI: R.V. Siddharthan)

“Dynamic Effective Stress Response of Surface and Embedded Footings in Sand,” Engineering Foundation, Grant RI-A-85-2, September 1, 1985 to June 30, 1987, \$17,000. (PI: R.V. Siddharthan)

“Use of a Modeling Facility for Studying Seismic Site Effect Problems,” Electric Power Research Institute, July 87 - Dec. 89, \$52,000. (PI: J. Brune; Co-PIs: R.V. Siddharthan and E. Maragakis)

- “An Improved Three-Layer Pavement Model and Granular Material Characterization,” NSF Grant CES-8713508, 1987 - 1990, \$58,332. (PI: D. Newcomb; Co-PIs: G.M. Norris, R.V. Siddharthan and E. Maragakis)
- “Development of Overlay Design Procedures,” Nevada Department of Transportation,” 1988-1992, \$140,000. (PI: J. Epps and P.E. Sebaaly; Co-PI: R.V. Siddharthan)
- “Survey and Evaluation of Highways in Nevada for Nuclear Waste Transport: Task 7.1,” Jan. 1989 - Aug. 1990, Nevada Nuclear Waste Project Office, \$89,474. (PI: R.V. Siddharthan; Co- PI: M. Stroup-Gardiner)
- “Pavement Response Studies Using Foam Rubber Models,” June 1989 - April 1990, UNR Research Advisory Board, \$6,300. (PI: R.V. Siddharthan)
- “Response of Layered Deposits to Traveling Surface Waves,” Mar. 1990 - Mar. 1992, NSF Grant No. MSS-8914775, \$75,608. (PI: R.V. Siddharthan; Co-PI: R. Fashbaugh)
- “Peak Bedrock Acceleration in Nevada,” Apr. 1990 - June 1993, Nevada Department of Transportation, \$84,191 (PIs: R.V. Siddharthan, J. Bell, J. Anderson and C. dePolo)
- “Physical Properties of NOVOPHALT Asphalt Concrete & Pavement Performance,” Mar. 1990 - Mar. 1993, NOVOPHALT, \$298,621 (PI: J. Epps; Co-PIs: A. Ebrahimpour, R.V. Siddharthan and M. Stroup-Gardiner)
- “Soil-Foundation-Structure Behavior at the Oakland Outer Harbor Wharf,” July 1990 - July 1991, California Strong Motion Instrumentation Program, \$24,953. (PI: G. Norris, Co-PI: R.V. Siddharthan)
- “Safety Evaluation of Proposed Rail Alignment,” Mar. 1990 - June 1991, Department of Energy, \$50,000. (PI: M. Coulson; Co-PIs: R.V. Siddharthan, G.M. Norris, and J. Carr)
- “Model Nonlinear Effects on Strong Motion,” April 1991 - Jan. 1992, Southern California Earthquake Center, \$38,000. (PI: J. Anderson, Co-PI: R.V. Siddharthan)
- “The Class A Prediction Phase of the VELACS Project,” Feb. 1992 - Jan. 1994, NSF, \$19,779. (PI: R.V. Siddharthan)
- “Nonlinear Soil Behavior in Strong Motion,” Feb. 1992 - Jan. 93, Southern California Earthquake Center, \$40,000. (PI: J. Anderson, Co-PI: R.V. Siddharthan)
- “Overview of Field Testing and ARS Plot Development at Sparks Nugget Viaduct” July 92 - Aug. 92, Nevada Department of Transportation, \$ 4,328. (PIs: G.M. Norris and R.V. Siddharthan)
- “Seismic Movements and Stiffness of Existing Bridge Abutments,” Jan. 93 - March 94, Nevada Department of Transportation, \$36,901. (PI: R.V. Siddharthan, Co-PI: E. Maragakis)
- “ARS PLOT Development for NDOT Sites,” Jan. 93 - June 93, Nevada Department of Transportation, \$4,328. (PIs : G.M. Norris and R.V. Siddharthan)

- “Abutment Movements and Bridge Design Implications in Strong Earthquakes,” April 93 - March 95, NSF, \$79,342. (PI: R.V. Siddharthan, Co-PI: E. Maragakis)
- “Permeability in Soils due to Fill and its Effects on the Groundwater Regime,” Oct. 1993 - Sept. 1995, Nevada Department of Transportation, \$74,999. (PI: G.M. Norris, Co-PI: R.V. Siddharthan)
- “Potential Railroad Alignment from UP/SP Across Northern Nevada to the Yucca Mountain Site,” Nov. 93 - Oct. 94, DOE, \$75,000 (PIs: R.V. Siddharthan & M.A. Coulson)
- “Seismological Perspective on Theoretical Non-Linear Effects on Strong Motions in Saturated Media: Phase I”, Feb. 1994 - March 1995, NSF/Southern California Earthquake Center, \$15,000. (PIs: J. Anderson & R.V. Siddharthan)
- “Integrated Study of Source, Path and Site Effects on Northridge Ground Motions,” July 1994 - July 1995, NSF, \$46,242. (PI: J. Anderson, Co-PIs: S. Feng and R.V. Siddharthan)
- “Investigation of Performance of Bridge Abutments in 1994 Northridge Earthquake,” Sept. 1994 - Aug. 95, NSF, \$46,788. (PI: R.V. Siddharthan, Co-PI: E. Maragakis)
- “Strain Wedge Modelling of Pile Group Interference and Pile Cap,” April 94 - June 95, Caltrans, \$44,496. (PI: G.M. Norris, Co-PI: R.V. Siddharthan)
- “Seismic Behavior of Reinforced Soil Walls,” Oct. 95 - Sept. 97, NSF, \$149,444. (PI: R.V. Siddharthan, Co-PI: B. Kutter and R.V. Whitman)
- “Seismological Perspective on Theoretical Non-Linear Effects on Strong Motions in Saturated Media: Phase II”, Feb. 1996 - March 1997, NSF/Southern California Earthquake Center, \$20,000. (PI: J. Anderson Co-PI: R.V. Siddharthan)
- “Determination of Pavement Damage from Super-Single and Singled-Out Dual Truck Tires,” Dec. 1996 - March 1998, NCHRP Project 1-36, Transportation Research Board, \$90,016. (PIs: P.E. Sebaaly and J.A. Epps, Co-PI: R.V. Siddharthan, C. Ashmore, and S. Tayabji)
- “Calibration of Fragility Estimation and Development of Fragility Information,” 10/97-10/99, NSF/State University of NY- Buffalo, \$194,827.(PIs: R. V. Siddharthan and E. Maragakis, Co- PIs: B. M. Douglas and G.M. Norris)
- “Theoretical and Field Non-Linear Effects on Strong Motions in Saturated Media”, Feb. 1998 - March 1999, NSF/Southern California Earthquake Center, \$20,000. (PI: J. Anderson, Co-PI: R.V. Siddharthan)
- “Pavement Material Characterization and Modeling of Long-Term Airfield Pavements,” May 1999 - May 2002, DOD-ARO, \$273,300. (PI: R. V. Siddharthan, Co-PI: J.A. Epps and P.E. Sebaaly)
- “Calibration of Fragility Estimation and Development of Fragility Information Year 2,” 10/99-10/00, NSF/State University of NY- Buffalo, \$199,872.(PIs: R.V. Siddharthan and E. Maragakis, Co-PIs: B. M. Douglas)



## Numerical Methods in Civil Engineering

Graduate Level:           Advanced Geotechnical Engineering  
 Geotechnical Earthquake Engineering, also Long Distant to UNLV  
 Seepage and Slope Stability

### PUBLICATIONS

Books:           *Earthquake-Induced Movements and Seismic Remediation of Existing Foundations and Abutments*, ASCE Geotechnical Special Publication No. 55, Editors: Steve Kramer and Raj V. Siddharthan, 1995.

*Engineering Geology and Geotechnical Engineering*, Proceedings of the 33<sup>rd</sup> Symposium, March 25-27, 1998, Editors: Richard A. Schultz and Raj V. Siddharthan.

### Reviewed Publications

1. Finn, W.D.L., Siddharthan, R.V., and Martin, G.R., "Wave Induced Instability in Ocean Floor Sands," Preprint No. 80 - 638, ASCE Convention and Exposition, Florida, Oct. 1980.
2. Finn, W.D.L., Siddharthan, R.V., and Martin, G.R., "Response of Seafloor to Ocean Waves," Journal of Geotechnical Engineering, ASCE, Vol. 109(4), April 1983, pp. 556-572.
3. Siddharthan, R.V., "Wave Induced Displacements in Seafloor Sands," International Journal of Numerical and Analytical Methods in Geomechanics, Vol. 11(2), March 1987, pp. 155-170.
4. Siddharthan, R.V., and Norris, G.M., "Deformation Response of Seafloor Sands to Storm Waves," Proceedings, 6th International Symposium on Offshore and Arctic Engineering, Houston, Vol. I, March 1987, pp. 417- 424.
5. Siddharthan, R.V., and Norris, G.M., "Performance of Foundations Resting on Saturated Sands," Proceedings, Earthquake Engineering and Soil Dynamics II Conference, Geotechnical Special Publication No. 20, ASCE, June 1988, pp. 508-522.
6. Siddharthan, R.V., and Maragakis, E.A., "Performance of Flexible Retaining Walls Supporting Dry Cohesionless Soils to Cyclic Loading," International Journal of Numerical and Analytical Methods in Geomechanics, Vol. 13, May 1989, pp. 309-326.
7. Maragakis, E.A. and Siddharthan, R.V., "A Simple Method for Estimation of the Nonlinear Abutment Stiffness in the Longitudinal Direction," ASCE Journal of Structural Engineering, Vol. 115(9), Sept. 1989, pp. 2382-2398.
8. Maragakis, E.A., Thornton, G., Saiidi, M. and Siddharthan, R.V., "A Simple Model for the Impact Between Bridge Deck and the Abutments During Earthquakes," Journal of Earthquake Engineering and Structural Dynamics, Vol. 18, 1989, pp. 1163-1178.
9. Siddharthan, R.V., and Norris, G.M., "Residual Porewater Pressure and Structural Response," International Journal of Soil Dynamics and Earthquake Engineering, Vol. 9(5), Sept. 1990, pp. 265-271.

10. Siddharthan, R.V., and Norris, G.M., "On the Seismic Displacement Response of Rigid Retaining Walls," Soils and Foundations, Vol. 31(2), June 1991, pp. 51-64.
11. Siddharthan, R.V., Ara, S., and Norris, G.M., "A Simple Rigid Plastic Model for Seismic Tilting of Rigid Walls," Journal of Structural Engineering, ASCE, Vol. 118(2), Feb. 1992, pp. 469-487.
12. Siddharthan, R.V., Anoooshehpour, A., and Epps, J.A., "Model Tests for Moving Load Effects on Pavements," Transportation Research Record No. 1307, TRB, 1991, pp. 20-28.
13. Siddharthan, R.V., Norris, G.M., and Epps, J.A., "Use of FWD Data for Pavement Material Characterization and Performance," Journal of Transportation Engineering, ASCE, Vol. 117(6), Nov./Dec. 1991, pp.660-678.
14. Krutz, N.C., Siddharthan, R.V., and Stroup-Gardiner, M., "Investigation of Rutting Potential Using Static Creep Tests on Polymer Modified Asphalt Concrete Mixtures," Transportation Research Record No. 1317, TRB, 1991, pp. 100-108.
15. Ong, C.L., Newcomb, D.E., and Siddharthan, R.V., "Comparison of Dynamic and Static Backcalculation Modulus for Three Layer Pavements," Transportation Research Record No. 1293, TRB, 1991, pp. 86-92.
16. Siddharthan, R.V., Sebaaly, P.E., and Javaregowda, M., "Investigation of Statistical Variation in FWD on Pavement Analysis," Transportation Research Record No. 1377, TRB, 1992, pp. 57-66.
17. Yu, G., Anderson, J., and Siddharthan, R.V., "On the Characteristics of Non-Linear Soil Response," Bulletin of the Seismological Society of America, Vol. 83(1), Feb. 1993, pp. 218-244.
18. Siddharthan, R.V., Zafir, Z. and Norris, G.M., "Moving Load Response of Layered Soil I : Formulation," ASCE Journal of Engineering Mechanics, Vol. 119(10), Oct. 1993, pp. 2052-2071.
19. Siddharthan, R.V., Zafir, Z. and Norris, G.M., "Moving Load Response of Layered Soil II : Verification and Application," ASCE Journal of Engineering Mechanics, Vol. 119(10), Oct. 1993, pp. 2072-2089.
20. Siddharthan, R.V., and El-Gamal, M., "Modeling of the Interaction of Water Waves with Nonlinear Porous Seabed," Computers & Structures, Vol. 51(5), June 1994, pp. 571-578.
21. Siddharthan, R.V., and Norris, G.M., "Analysis of Offshore Pipeline Flotation During Storms in Liquefiable Soils," Third International Offshore and Polar Engineering Conference, Vol. II, Singapore, June 1993, pp. 106-113.
22. Norris, G.M., Siddharthan, R.V., Zafir, Z., and Gowda, P., "Soil and Foundation Conditions and Ground Motions at Cypress Viaduct," Transportation Research Record No. 1411, TRB, 1993, pp. 61-69.
23. Norris, G.M., Siddharthan, R.V., Zafir, Z. and Gowda, P., "Seismic Pile Foundation Stiffnesses at Cypress Street Viaduct," Transportation Research Record No. 1411, TRB, 1993, pp. 70-80.

24. Siddharthan, R.V., El-Gamal, M. and Maragakis. E.A., "Investigation of Performance of Bridge Abutments in Seismic Regions," ASCE Journal of Structural Engineering, Vol. 120(4), April 1994, pp. 1327-1346.
25. Zafir, Z., Siddharthan, R.V., and Sebaaly, P.E., "Dynamic Pavement Strains from Moving Traffic Loads," ASCE Journal of Transportation Engineering, Vol. 120(5), Sept./Oct. 1994, pp. 821-842.
26. Siddharthan, R.V., Sebaaly, P.E. and Zafir, Z., "Pavement Strains Induced by Spent Fuel Transportation Trucks," Transportation Research Record No. 1448, TRB, 1994, pp. 8-15.
27. Siddharthan, R.V., Sebaaly, P., and Zafir, Z., "Dynamic Response Evaluation of Inclined Pavements with Interface Shear," International Journal of Vehicle Design, Vol. 3 , Nos 1-4, 1996, pp. 382-398.
28. Siddharthan, R.V., and El-Gamal, M., "Earthquake-Induced Ground Settlements of Bridge Abutment Fills," Analysis and Design of Retaining Structures Against Earthquakes, ASCE Special Publication No. 60, 1996, pp. 100-123.
29. Siddharthan, R.V., Yao, J., and Sebaaly, P.E., "Field Verification of a Moving Load Model for Pavement Response," Transportation Research Record No. 1540, TRB, 1996, pp. 125-131.
30. Norris, G.M., Siddharthan, R.V., Zafir, Z., Abdel-Ghaffar, S., and Gowda, P., "Soil-Foundation-Structure Behavior at the Oakland Outer Harbor Wharf," Transportation Research Record No. 1546, TRB, 1997, pp. 100-111.
31. Norris, G.M., Siddharthan, R.V., Zafir, Z., and Madhu, P., "Liquefaction and Residual Strength of Sands from Drained Triaxial Tests," Journal of Geotechnical and Geo-Environmental Engrg., ASCE, Vol. 123(3), March 1997, pp. 220-228.
32. Ni, S.D., Siddharthan, R.V., and Anderson, J.G., "Characteristics of Nonlinear Response of Deep Saturated Soil Deposits," Bulletin of the Seismological Society of America Vol. 87(2), April 1997, pp. 342-355.
33. Siddharthan, R.V., El-Gamal, M., and Maragakis, E.A., "Stiffnesses of Abutments on Spread Footing with Cohesionless Backfill," Canadian Geotechnical Journal, Vol. 34(5), October 1997, pp. 686-697,
34. Norris, G.M., Zafir, Z., and Siddharthan, R., "An Effective Understanding of Liquefaction Behavior," Journal of Environmental & Engineering Geoscience, Vol. IV, No. 1, 1998, pp. 93-101.
35. El-Gamal, M., and Siddharthan, R.V., "Stiffnesses of Abutments on Piles in Seismic Bridge Analyses," Soils and Foundations, Vol. 38(1), March 1998, pp. 77-87.
36. Siddharthan, R.V., Yao, J., and Sebaaly, P.E., "Pavement Strain from Moving Dynamic 3-D Load Distribution," Journal of Transportation Engrg., ASCE, Vol. 124(6), Nov./Dec. 1998, pp. 557-566.

37. Siddharthan, R.V., and El-Gamal, M., "Permanent Rotational Deformation of Dry Cohesionless Slopes under Seismic Excitations," Transportation Res. Rec. No. 1633, TRB, 1999, pp. 45-50.
38. Siddharthan, R.V., and El-Gamal, M., "Investigation of Performance of Bridge Abutment Fills in 1994 Northridge Earthquake," Seismic Response of Concrete Bridges, ACI Publication No. SP-187, 1999, pp. 69-88.
39. Siddharthan, R.V., and Sebaaly, P.E., "Investigation of AC layer Strains from Wide-Base Tires," Transportation Research Record No. 1655, TRB, 1999, pp. 168 - 174.
40. Siddharthan, R.V., Krishnamenon, N., and Sebaaly, P.E., "Pavement Response Evaluation using Finite-Layer Approach," Transportation Research Record No. 1709, TRB, 2000, pp. 43-49.
41. Ni, S.D., Anderson, J.G., Zeng, Y., and Siddharthan, R.V., "Expected Signature of Nonlinearity on Regression for Strong Ground Motion Parameters," Bulletin of Seismological Society of America, Vol. 90, 6B, 2000, pp. S53-S64.
42. Meis, R., Maragakis, E.A., and Siddharthan, R., "Static Axial Behavior of Some Typical Restrained Joints," Journal of Testing and Evaluation, Vol. 29(5), September 2001, pp. 485-491.
43. Siddharthan, R.V., Krishnamenon, N., El-Mously, M., and Sebaaly, P.E., "Investigation of Tire Contact Stress Distributions on Pavement Response," Journal of Transportation Engineering, ASCE, Vol. 128(2), March/April, 2002, pp. 136-144.
44. Siddharthan, R.V., El-Mously, M., Krishnamenon, N., and Sebaaly, P.E., "Validation of a Pavement Response Model using Full-Scale Field Tests," International Journal in Pavement Engineering, Vol. 3(2), 2002, pp. 85-93.
45. El-Desouky, M.M., El-Mously, M., Siddharthan, R.V., and Sebaaly, P.E., "Development and Validation of a Pavement Response Model," Proceedings, 9th International Conference on Asphalt Pavements, Copenhagen, Norway, May 2002, Vol. I: 8-1 (CD ROM).
46. Saiidi, M., B. Gopalakrishnan, and R. Siddharthan, "Shake Table Studies of Effect of Foundation Flexibility on Seismic Demand in Substandard Reinforced Concrete Bridge Piers," ACI Special Publication Series SP-209, Innovations in Design with Emphasis on Seismic, Wind, and Environmental Loading; Quality Control and Innovations in Materials/Hot-Weather Concreting, December 2002, pp. 553-570.
47. Sebaaly, P.E., Siddharthan, R., and Huft, D., "Impact of Heavy Vehicles on Low-Volume Roads," Transportation Research Record No. 1819, Vol. 2, Part 9, TRB, 2003, pp. 228-237.
48. Sebaaly, P.E., Siddharthan, R., El-Desouky, M., Strand, D., and Huft, D., "Effect of Off-Road Equipment on Flexible Pavements," Transportation Research Record No. 1821, TRB, 2003, pp. 29-38
49. Siddharthan, R.V., Ganeshwara, V., Kutter, B.L., El-Desouky, M., and Whitman, R.V., "Seismic Deformation of Bar Mat MSE Walls I: Centrifuge Tests," Journal of Geotechnical and Geo-Environmental Engrg., ASCE, Vol. 130(1), ASCE, January 2004, pp. 14-25.

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