

Curriculum Vitae

SHAKHZOD M. TAKHIROV

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QUALIFICATIONS SUMMARY

- ◆ Doctor of Philosophy in Mechanical Engineering (Mechanics of Deformable Solids).
- ◆ Licensed as Professional Engineer in California (Civil Engineering)
- ◆ Professional record of increased responsibility, challenge, and recognition.
- ◆ Strong theoretical background and expertise in solid mechanics and earthquake engineering:
 - Analytical methods for solid dynamics and fracture mechanics (20+ years)
 - Stress-strain analysis (20+ years)
 - Nonlinear finite element analysis (10+ years)
 - Wave dynamics (including acoustics, transient wave dynamics, and dynamics of seismic waves: 20+ years)
 - Structural vibration and soil-structure interaction (20+ years)
- ◆ Extensive knowledge and expertise in experimental earthquake engineering:
 - Experimental study and failure analysis of structural components and elements of buildings (10+ years)
 - Structural damage assessment by means of laser scanners
 - Seismic qualification testing of non-structural components per AC156 requirements (9+ years)
 - Seismic qualification testing of electrical substation equipment per IEEE 693 standard (10+ years)
 - Seismic qualification testing per other documents (GR-63, IEC-1999)
 - Seismic evaluation of existing buildings (9+ years)
 - Experimental study of new materials and seismic devices (9+ years)

PROFESSIONAL EXPERIENCE

Earthquake Engineering Research Center, University of California, Berkeley, California (1997-Present):

As a senior development engineer (06/2002-current), a specialist (04/1999-06/2002), and a visiting assistant researcher (04/1997-04/1999), had performed the following duties:

- ◆ Preparation of proposals for funding of future scientific studies.
- ◆ Project management (making engineering decisions, budget preparation and maintenance, design of test setups, schedule preparation, supervision assigned personnel, and working directly with clients and other engineers).
- ◆ Conducting a full-cycle scientific research:
 - Design of test setup for mechanical stress-strain analysis and experimental study of test specimens.
 - Computer analysis – detailed numerical analysis of expecting specimen's behavior (finite element modeling, nonlinear analysis, and evaluation).
 - Comprehensive experimental study
 - Data reduction and detailed analysis of experimental data

- Comparative analysis of experimental and theoretical (analytical or numerical) results
- Documentation (preparation of final reports or archival journal papers, oral, and written presentations of the results).

The projects at UC Berkeley included (from latest to earliest):

1. Application of laser scanning in structural damage assessment of buildings damaged during the January 12, 2010 Haiti earthquake. Adequate accuracy of the laser scanner was confirmed in many projects conducted earlier in laboratory environment. This first application of laser scanning technology for massive quantitative assessment of structural damage in earthquake aftermath provided extremely valuable data for engineers impossible to obtain by other conventional methods.
2. Failure mode analysis of concrete columns under earthquake loading. In this project funded by Caltrans, failure modes and failure surfaces of concrete columns supporting deck of a bridge were determined based on conventional data and point cloud data generated by the laser scanning technology.
3. Failure mode analysis of concrete footings under earthquake loading was conducted. Failure modes and failure surfaces of large full-scale concrete footings usually installed under steel frame buildings were determined based on conventional data and point cloud data generated by the laser scanning technology.
4. Failure mode analysis of a two-story wood frame house representing San Francisco 1940's design of residential house with a garage space on the first level was conducted by means of high-definition laser scanning technology. The building was tested on the shaking table and its failure modes were evaluated through conventional data recorded during the test and a point cloud data acquired by the laser scanning technology.
5. Seismic evaluation of non-structural components and equipment per AC-156 requirements: air handlers, cooling towers, water and wine tanks, and many others.
6. Seismic testing and failure modes study of suspended acoustic ceiling systems. Several projects funded by the manufacturers of the suspended ceiling systems were conducted to improve the design of the system and achieve compliance to the current code on nonstructural components (per AC-156 requirements) in earthquake prone regions.
7. Seismic full-scale qualification testing on Earthquake Simulation Platform and evaluation of failure modes of electrical substation equipment. A number of projects (funded by the California Energy Commission) was aimed to improve the seismic performance and decrease vulnerability of a high voltage electrical equipment providing power for large cities across the United States.
8. Development of IEEE-693 2005 standard on seismic qualification testing of high voltage electrical substation equipment. The results of the comprehensive study were incorporated into the current version of IEEE-693 testing protocol.
9. Numerical analysis of buckling failure modes of steel-reinforced seismic isolators. The comprehensive analysis confirmed a possibility of buckling failure in compression and in tension that was predicted earlier by a simplified theory.
10. Dynamic testing and failure modes study of composite fiber-reinforced rubber bearings (seismic isolators). The project demonstrated highly effective seismic performance of newly developed (at UC Berkeley) fiber-reinforced seismic isolators for seismic protection of buildings.
11. Comprehensive testing and nonlinear finite element analysis (including buckling study, instability analysis, and failure modes study) of full-scale steel welded moment connections and components. The study consisted of several phases and aimed to improve seismic resistance of steel frame buildings and prevent failures observed after the Northridge 1994 earthquake.

12. Seismic testing and nonlinear finite element analysis (including buckling study, instability analysis, and failure modes study) of full-scale steel bolted moment connections and components. The extensive study aimed to study bolted connections as a better alternative to welded connections.
13. Testing and failure analysis of materials with complex mechanical properties (shape memory alloys). The project assessed the feasibility of future use of shape memory alloys in earthquake engineering.
14. Cyclic testing and analysis of rubber and steel dampers to evaluate their seismic performance. The project demonstrated highly effective seismic performance of these devices and recommended for use in building design.
15. Analysis, ambient vibration testing, and evaluation of the building of the Berkeley Public Library in Berkeley, California. The old building of the library was evaluated by means of ambient vibration study for further seismic reconstruction strategy.
16. Numerical and analytical study of a non-stationary soil-structure interaction problem of a base-isolated building. The soil-structure interaction analysis has to be conducted for important structures (nuclear power plants, water dams and so on) which failure can lead to significant human life and financial losses.

Quest Structures, 3 Altarinda Road, #203, Orinda, CA 94563 (2006-current : part time consulting)

As Senior Research Engineer had been responsible for ongoing activities including the following duties:

- preparation of realistic finite element model of water dams
- conducting finite element analysis of water dams under variety of loading conditions
- preparation of final report.

Projects at Quest Structures were related to

1. Numerical analysis of a concrete water dam under alkali-aggregate expansion. In this study a finite element model of the dam was generated and analyzed to estimate locations of 'hot spots' in the dam where the stresses exceed concrete's failure stress due to alkali-aggregate expansion of the dam.
2. Failure simulation of a concrete water dam built in Germany. Several possible scenarios of the dam failure along the structural joints were determined.
3. Soil-structure interaction of a water dam's tower during an earthquake.

Institute of Mechanics & Seismic Stability of Structures (IMSSS), Tashkent, Uzbekistan (1984-1997)

As a head of Wave Dynamics Group (03/1992-12/1996), a senior scientific researcher (03/1992-12/1996), scientific researcher (12/1990-03/1992), a junior scientific researcher (04/1990-12/1990), and an engineer (08/1984-04/1985) had been responsible for ongoing research activities including the following duties:

- preparation of research proposals,
- establishing schedules and workload distribution among members of a research team,
- discussion and analysis of intermediate research results; determination of new problems and new research approaches to solve them,
- preparation of oral presentations, final reports, and archival journal papers.

Projects at IMSSS were related to

- Wave and fracture dynamics with applications in earthquake engineering and seismology:
 - Non-stationary propagation and diffraction of waves in anisotropic elastic solids. The study was aimed on the better understanding the seismic wave propagation and diffraction phenomena by considering more realistic anisotropic model for a soil.
 - Theoretical research on non-stationary structure vibration including soil-structure interaction during seismic impact. The soil-structure interaction analysis is extremely valuable for very important

buildings or structures with hazardous materials (nuclear power stations, for instance) built in seismically active zones.

- Full-scale dynamic testing and failure analysis of underground constructions under impact of strong underground explosions.
- Crack propagation and dynamics of fracture mechanics. Dynamics of crack propagation in media with complex anisotropic properties was studied.
- Wave dynamics in fluid-saturated soils. The project was targeted on the better understanding of highly dangerous soil-liquefaction phenomenon during earthquakes that can cause sinking of a building into a soil.

EDUCATION

- ◆ Doctor of Philosophy in Mechanical Engineering, Moscow University, Russia (1989)
- ◆ Master of Science in Mechanical Engineering, Tashkent University, Tashkent, Uzbekistan (1984)

FIELDS OF EXPERTISE

- ◆ Strong theoretical background and expertise in solid mechanics and earthquake engineering:
 - Stress-strain analysis (20+ years)
 - Analytical methods for solid dynamics (20+ years)
 - Nonlinear finite element analysis (10+ years)
 - Wave dynamics (including acoustics, transient wave dynamics, and dynamics of seismic waves: 20+ years)
 - Structural vibration and soil-structure interaction (20+ years)
- ◆ Extensive knowledge and expertise in experimental earthquake engineering:
 - Experimental study and failure analysis of structural components and elements of buildings (10+ years)
 - Novel techniques in documenting structural damage including structural damage assessment by means of laser scanners
 - Seismic qualification testing of non-structural components per AC156 requirements (9+ years)
 - Seismic qualification testing of electrical substation equipment per IEEE 693 standard (10+ years)
 - Seismic qualification testing per other documents (GR-63, IEC-1999)
 - Failure analysis and structural damage assessment
 - Seismic evaluation of existing buildings (9+ years)
 - Experimental study of new materials and seismic devices (9+ years)
 - Designing experimental setup, instrumentation and data acquisition
 - Implementation of control theory in experimental setups

TEACHING EXPERIENCE

- **Seismic Resistance of Structures** (the graduate course taught at Tashkent Institute of Design and Architecture, Tashkent, Uzbekistan, 1990-93).
- **Propagation of Non-Stationary Elastic Waves and Their Diffraction on Obstacles** (the post-graduate course taught at the Institute of Mechanics and Seismic Stability of Structures, Tashkent, Uzbekistan, 1994-96).
- **Part-time instructor at Diablo Valley College, Pleasant Hill, CA (from 2006 to current)**

EXPERIENCE AS A REVIEWER AND EVALUATOR

- **Reviewed and evaluated number of scientific papers submitted for publication** (Uzbekistan Journal: 'Problems of Mechanics', Tashkent, Uzbekistan: 1990-1997)

- **Reviewed and evaluated number of dissertations submitted for Ph.D. degree attestation** (Board of Doctoral Attestation at the Institute of Mechanics and Seismic Stability of Structures, Tashkent, Uzbekistan: 1994-1996)
- **Serve as a peer reviewer for ASCE Journal of Bridge Engineering**
- **Serve as a peer reviewer for Journal of Mechanics of Materials and Structures**
- **Serve as a peer reviewer for JEE (Journal of Earthquake Engineering)**
- **Serve as a peer reviewer for Structural Engineering and Mechanics (South Korea)**

PROFESSIONAL MEMBERSHIPS

- American Society of Civil Engineers (ASCE)
- Structural Engineers Association of Northern California (SEAONC)
- American Society of Mechanical Engineers (ASME)
- Applied Technology Council (ATC)

HONORS AND AWARDS

- Fulbright Program Postdoctoral Fellowship
- Honorary Post-Doctoral award (Title of Senior Scientific Researcher)
- Moscow University Graduate Fellowship

COMPUTER SKILLS

- programming in the Matlab, Java, C/C++, Visual Basic and Fortran environments
- knowledge and experience in Unix and Linux shell programming
- extensive experience in nonlinear finite element analysis (ABAQUS, NASTRAN)
- extensive use of AutoCAD, MS Office (Word, Excel, and Access)
- knowledge of structural analysis programs (OpenSees, SAP-2000)
- modeling 3D objects in Leica's Cyclone application
- SkechUp modeling
- knowledge and experience in LabView programming

PUBLICATIONS

1. A. S. J. Gilani , S. M. Takhirov , and R. E. Bachman, 'Current Code Requirements and Qualification Test Standard Development for Suspended Ceilings', the 9th US National and 10th Canadian Conference on Earthquake Engineering, Toronto, Canada, July 25-29, 2010.
2. Shakhzod M. Takhirov, 'Laser Scanners in Structural Assessment and FE modeling', 2010 Structures Congress, Orlando, Florida, May 12-15, 2010.
3. Amir S.J. Gilani and Shakhzod M. Takhirov, 'Requirements for test standards and qualification procedures for suspended ceilings', 2010 Structures Congress, Orlando, Florida, May 12-15, 2010.
4. Shakhzod Takhirov. 'Seismic Qualification of Air Handler Unit (Huntair Model AHU-3). A Report to Huntair', Report No. PEER – STI/2009-04, November 2009.
5. Shakhzod Takhirov. "Seismic Evaluation of Suspended Ceiling Systems. A Report to US Gypsum Co.", Report No. PEER – STI/2009-02, October 2009.
6. Shakhzod Takhirov. "Seismic Qualification Report on EC-1, P and EV-1 Types of 245-kV Disconnect Switches with EVG-1 Grounding Switch Installed", Report No. SS-SCE-2008, Earthquake Engineering Research Center, University of California, Berkeley, December 2008.

7. Amir S. J. Gilani and Shakhzod M. Takhirov. 'Test Standard and Seismic Qualification Requirements for Suspended Ceilings', Proceedings of 3AESE: 3rd International Conference on Advances in Experimental Structural Engineering, October 15-16, 2009, San Francisco, CA.
8. A. Kanvinde, S. Takhirov, I. Gomez. 'High-Definition Laser Scans in Structural Engineering for Finite Element Model verification of a Column Base Plate', NEES Annual meeting, Honolulu, Hawaii: June 23-25, 2009.
9. S. Takhirov and A. Gilani. 'Earthquake performance of high voltage electric components and new standards for seismic qualification', Proceedings of TCLEE-2009, Oakland, CA: June 28-July 1 2009.
10. S. Takhirov, A. Schiff, L. Kempner, and E. Fujisaki. 'Breaking Strength of Porcelain Insulator Sections Subjected to Cyclic Loading', TCLEE-2009 Proceedings, Oakland, CA: June 28-July 1 2009.
11. K. Mosalam, A. Hashemi, T. Elkhoraibi, and S.Takhirov. ' Seismic Evaluation of Wood House Over Garage', The 14th World Conference on Earthquake Engineering, Beijing, China: October 12-17, 2008.
12. K. Mosalam, S. Takhirov , and A. Hashemi. 'Seismic Evaluation of 1940's Wood-Frame Building Using Conventional Measurements and High-Definition Laser Scanning', Earthquake Engineering and Structural Dynamics, 2009.
13. J. M. Kelly and S. M. Takhirov. "Fiber-Reinforced Seismic Bearings for Low-Cost Seismic Isolation Systems". Proceedings of the 10th World Conference on Seismic Isolation, Energy Dissipation and Active Vibrations Control of Structures, Istanbul, Turkey, May 27-30, 2007.
14. J. M. Kelly & S. M. Takhirov, "Tension buckling in multilayer elastomeric isolation bearings", Journal of Materials and Structures, Vol. 2, No. 8, 2007, pp.1591-1606.
15. J.M. Kelly and S.M. Takhirov, "Fiber-Reinforced Seismic Isolators as Low-Cost Alternative to Steel-Reinforced Elastomeric Bearings", Proceedings of the International Conference on Earthquake Engineering (ICEE-2006), Lahore, Pakistan, September 8-9, 2006.
16. S.M. Takhirov and J. M. Kelly, "Buckling of Elastomeric Seismic Isolation Bearings: Numerical Simulation". Proceedings of the International Conference on Modern Problems and Directions of Mechanics, Tashkent Uzbekistan, May 17-18, 2006.
17. S.M. Takhirov and J. M. Kelly, "Numerical Study on Buckling of Elastomeric Seismic Isolation Bearings", The 2006 Structures Congress and the 17th Analysis & Computation Specialty Conference, St. Louis, Missouri, USA, May 18-21, 2006.
18. J. Kelly and S. Takhirov. "Analytical and Numerical Studies of Tension Buckling of Multi-Layer Elastomeric Isolators", Proceedings of The Ninth Pan American Congress of Applied Mechanics, January 2-6, 2006, Merida, Yucatan, Mexico, p. 88.
19. Takhirov S., Fenves G., and Fujisaki E. 'Seismic Qualification and Fragility Study of Line Break 550-kV Disconnect Switches', Pacific Earthquake Engineering Research Center, University of California at Berkeley, PEER 2004/08, February 2005.
20. Takhirov S., Fenves G., Fujisaki E., and Clyde D. 'Ground Motions for Earthquake Simulator Qualification of Electrical Equipment', Pacific Earthquake Engineering Research Center, University of

California at Berkeley, PEER 2004/07, January 2005.

21. Kelly J.M., Takhirov S.M., 'Analytical and Numerical Study on Buckling of Elastomeric Bearings with Various Shape Factors', Earthquake Engineering Research Center, University of California at Berkeley, EERC 2004/03, December 2004.
22. Kelly J.M. and Takhirov S.M., 'Experimental Study of Steel Reinforced Rubber Bearings with Various Shim Thicknesses', Proceedings of the 2004 SEM X International Congress & Exposition on Experimental and Applied Mechanics, June 7-10, 2004, Costa Mesa, California USA, pp.12-17.
23. Kelly J.M. and Takhirov S.M. Experimental Study on Seismic Performance of Inexpensive Fiber-Reinforced Rubber Bearings. Proceedings of the International Conference on Problems of Mechanics and Seismodynamics of Structures, May 27-28, 2004, Tashkent, Uzbekistan, pp. 14-17.
24. Takhirov S., Fenves G., and Fujisaki E. Recommended Changes in IEEE 693 Standard on Qualification Testing of Electrical Substation Equipment by Means of Earthquake Simulator. Proceedings of the International Conference on Problems of Mechanics and Seismodynamics of Structures, May 27-28, 2004, Tashkent, Uzbekistan, pp. 199-201.
25. Fenves G., Takhirov S., and Fujisaki E. Non-Stationary Strong Motion Time History for Qualification Testing of Electrical Equipment. Proceedings of ATC-29-2 Seminar on Seismic Design, Retrofit, and Performance of Nonstructural Components in Critical Facilities, October 23-24, 2003, Newport Beach, California, pp. 457-470.
26. Kelly J.M. and Takhirov S.M. Analytical and Experimental Study of Fiber-Reinforced Strip Isolators. Pacific Earthquake Engineering Research Center, University of California at Berkeley, PEER 2002/11, September 2002.
27. Popov E.P. and Takhirov S.M. Bolted Large Seismic Steel Beam-to-Column Connections. Part 1: Experimental Study. Engineering Structures: The Journal of Earthquake, Wind and Ocean Engineering, Vol. 24, Issue 12, December 2002, pp. 1523-1534: Elsevier Science Ltd.
28. Takhirov S.M. and Popov E.P. Bolted Large Seismic Steel Beam-to-Column Connections. Part 2: Numerical Nonlinear Analysis. Engineering Structures: The Journal of Earthquake, Wind and Ocean Engineering, Vol. 24, Issue 12, December 2002, pp. 1535-1545: Elsevier Science Ltd.
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30. Takhirov S.M. and Popov E.P. Numerical Nonlinear Analysis of Large Bolted Seismic Steel Beam-to-Column Connections. The Proceedings of Uzbek Academy of Sciences (Izvestiya Akademii Nauk Uzbekistana), vol.4, 2002, pp.10-18 (in English).
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33. Kelly J.M., Takhirov S.M. Analytical and Experimental Study of Fiber-Reinforced Rubber Bearing. Pacific Earthquake Engineering Research Center, University of California at Berkeley, PEER 2001/11.
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 35. Popov E.P., Takhirov S.M. Large Seismic Steel Beam-to-Column Connections. STEEL TIPS, Structural Educational Council, March 2001.
 36. Popov E.P., Takhirov S.M. Experimental Study of Large Seismic Steel Beam-to-Column Connections. Pacific Earthquake Engineering Research Center, University of California at Berkeley, PEER 2001/1.
 37. Kim, T., Whittaker A.S., Gilani A.S.J., Bertero V.V., Takhirov, S. Cover-Plate and Flange-Plate Reinforced Steel Moment-Resisting Connections. Pacific Earthquake Engineering Research Center, University of California at Berkeley, PEER 2000/7, September 2000.
 38. Takhirov S.M. Analysis of Soil-Structure Interaction for Base-Isolated Buildings. Proceedings of the 8th International Conference on Nuclear Engineering 2000, Baltimore, Maryland, April 2-6, v. 2, pp. 283-289.
 39. Blondet, M., Takhirov, S. Cyclic Testing of Rubber “Marsh Mellow” Springs & Steel “Belleville” Washer Springs. Report to Steven Tipping & David Mar, University of California at Berkeley, Department of Civil & Environmental Engineering, 1998.
 40. Takhirov, S., Blondet, M. Ambient Vibration Study of Berkeley Public Library, Report to Berkeley Public Library. Report No. UCB/SEMM-97/10, Structural Engineering Mechanics and Materials, 1997.
 41. Takhirov, S.M. Double Wave Diffraction by a Massive Strip Lying on a Transversally Isotropic Half-Space. Mechanics of Solids, (Izvestiya RAN. Mekhanika Tvedogo Tela), Vol. 30, No. 4, pp. 88-92, 1995 (translated into English).
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Conference “Problems of Mechanics and Machine Design”, May 25-27, 1993, Tashkent, Uzbekistan (in Russian).

47. Niyazmatova, R.T., Rashidov, I.T., and Takhirov, S.M. Exact Solution of Spatial Diffraction Problem for Wedge with Different Types of Boundary Conditions. Proceedings of Uzbek Academy of Sciences (Dokladi Akademii Nauk UzSSR), No 3, 1992 (in Russian).
48. Niyazmatova, R.T., Rashidov, I.T., Takhirov, S.M. Exact Solution of Space Problem of Diffraction on Wedge With Various Boundary Conditions. Uzbekistan Journal: Problems of Mechanics (Uzbekskii Jurnal Problemi Mekhaniki), vol. 2, 1992 (in Russian).
49. Takhirov, S.M. Non-Stationary Wave Diffraction on a Massive Strip Resting on Anisotropic Half-Space. Uzbekistan Journal: Problems of Mechanics (Uzbekskii Jurnal Problemi Mekhaniki), vol. 1, 1992 (in Russian).
50. Takhirov, S.M. Motion of a Rigid Strip Lying on a Interface Between a Fluid and an Elastic Solid, in the Case of Non-Stationary Wave Diffraction. Mechanics of Solids, (Izvestiya AN SSSR. Mekhanika Tvedogo Tela), Vol. 25, No.4, pp.158-163, 1990 (translated into English).
51. Takhirov, S.M. and Rashidov, I.T. Motion of Two Strip System Due Diffraction of Non-Stationary Wave. Presentations of Uzbek Academy of Science, No 7, 1990 (in Russian).
52. Niyazmatova, R.T., Takhirov, S.M., Rashidov, I.T. Motion of a Rigid Strip Lying on a Plane Interface of Two Elastic Media Due Diffraction of Non-Stationary Wave. Transactions of Academy of Sciences of UzSSR. Technical Sciences (Izvestiya Akademii Nauk UzSSR. Seria Tekhnicheskikh Nauk), vol. 5, 1990 (in Russian).
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54. Takhirov, S.M. Motion of a Massive Strip Lying on a Transversally Isotropic Elastic Half-Space, and Acted upon by a Non-Stationary Wave. Mechanics of Solids, (Izvestiya AN SSSR. Mekhanika Tvedogo Tela), Vol. 24, No.3, pp. 87-90, 1989: Allerton Press Inc (translated into English).
55. Takhirov, S.M. Spatial Diffraction Problem on a Rigid and Opaque Wedge in a Biot Medium. Moscow University Mechanics Bulletin (Vestnik Moskovskogo Universiteta. Mekhanika), vol. 42, No. 6, pp.82-84, 1987: Allerton Press Inc (translated into English).
56. Takhirov, S.M. Exact Solutions of Space Problem of Diffraction on Wedge in Biot’s Medium. Proceedings of Presentations at the Sixth Soviet Congress on Theoretical and Applied Mechanics, September 24-30, 1986, Tashkent, Uzbekistan (in Russian).

RECENT CONFERENCE PRESENTATIONS

1. Shakhzod M. Takhirov, 'Laser Scanners in Structural Assessment and FE modeling', 2010 Structures Congress, Orlando, Florida, May 12-15, 2010.
2. Amir S.J. Gilani and Shakhzod M. Takhirov, 'Requirements for test standards and qualification procedures for suspended ceilings', 2010 Structures Congress, Orlando, Florida, May 12-15, 2010.

UPCOMING CONFERENCE PRESENTATIONS/PUBLICATIONS

1. Amir Gilani and Shakhzod Takhirov. 'Current U.S. practice of seismic qualification of suspended ceilings by means of shake table tests' submitted for publication in INGEGNERIA SISMICA journal (Italy).
2. Khalid Mosalam, Shakhzod Takhirov, Eduardo Miranda, Eduardo Fierro. 'Laser Scanning Technology for Damage Assessment after the January, 12, 2010 Haiti Earthquake' submitted for oral presentation at NEES/PEER annual meeting in San Francisco, California, October 7-9, 2010.
3. Shakhzod Takhirov and Khalid M. Mosalam. 'Using HDS to Assess the Effects of the Haiti Earthquake on Various Types of Structures', 2010 Leica Geosystems Worldwide HDS User Conference, October 25-27, San Ramon, CA.
4. Khalid M. Mosalam, Shakhzod M. Takhirov, and Mark Kelly. 'Damage Assessment Using Laser Scanning after the January, 12, 2010 Haiti Earthquake', Special Issue of 'Spectra' Journal on the Haiti Earthquake, 2011.
5. Stuart Nishenko, Khalid Mosalam, Eric Fujisaki and Shakhzod Takhirov. 'Seismic Performance of Insulators for Electric Substations' submitted for oral presentation at NEES/PEER annual meeting in San Francisco, California, October 7-9, 2010.

REFERENCES

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