March, 2018

TAREK H. ABDOUN

PRESENT POSITION

Thomas Iovino Chair Professor,
Technical Director, RPI Geo-Centrifuge Center
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EDUCATION

Ph.D., Civil Engineering (Geotechnical Engineering)	Rensselaer Polytechnic Institute Troy, NY	May '97

Dissertation: Centrifuge Modeling of Seismically Induced Lateral Spreading and Its Effect on Pile Foundation

M.S., Civil Engineering (Geotechnical Engineering)	Rensselaer Polytechnic Institute Troy, NY	May '94

Thesis: Prediction of Soil Deformation Due to Seismically-Induced Liquefaction

B.S., Civil Engineering (Structural Engineering)	Cairo University Cairo, Egypt	June '91

ACADEMIC/PROFESSIONAL EXPERIENCE

Associate Dean for Research & Graduate Education, Thomas Iovino Chair Professor Technical Director, RPI's NEES Geo-Centrifuge Research Center.	School of Engineering (SoE) Rensselaer Polytechnic Institute	Jan 2011-Aug. 2015

- Develop and implement the SoE strategic three-year research plan. The plan is the road map for increasing research expenditures and is the driving force for allocating institute resources. The plan led to increasing SoE external research funding by 30% (from about $42M to over $52M).
- Developed and implement a plan to increase the graduate student program from 500 students to 700 over three years.
- Lead the effort to establish long term research agreements with industry
- Increase industry and endowed funding for graduate student fellowships.
- Support the SoE fundraising and diversity initiatives.
- Technical Director of RPI's CEES (Center for Earthquake Engineering Simulation), with about $2.5M of funded research per year (2010-2011).
- Co-leader of a $7M project funded by NIST Technology Innovation Program (TIP), "*Development of a Multi-scale Monitoring and Health Assessment Framework for Effective Management of Levees and Flood-Control Infrastructure Systems*". The project aims at monitoring and assessing large, distributed infrastructure systems in varying stages of deterioration, which are critical for extend the lives of these critical systems and in the development of sustainable systems.
- Participation as PI or co-PI in several successful research proposals to DHS, NSF, U.S. Army and NIST with a total research funding of $12M (2009-2014).

Interim Department Head,
Thomas Iovino Chair Professor
Technical Director, RPI's NEES Geo-Centrifuge Research Center.

Dept of Civil & Env. Engineering
Rensselaer Polytechnic Institute

Jan 2009 – Dec 2010

- Increased the number of department faculty members in FY2010 from 12 (well below critical mass) to 17 (two new senior faculty, one junior and two teaching faculty); an increase of about 40%. Also, successfully negotiated two additional faculty positions for FY2011, which will increase the department faculty to a total of 19 (its largest size since 1980s).
- Facilitated/aided increasing department external research support by 85% over 18 month period (from about $8 M in July 2009 to over $15 M in Oct. 2010).
- Conducted very successful celebration of 175th Anniversary of Rensselaer Polytechnic Institute (RPI) granting first civil engineering degree in the U. S. in 1835.
- Coordinated successful campaign that led to prestigious dedication by the American Society of Civil Engineers (ASCE) of the Civil Engineering Department at Rensselaer Polytechnic Institute as a Historic Civil Engineering Landmark for offering the first civil engineering degree in the English-speaking world in 1835. The list of historic civil engineering landmarks includes the Eiffel Tower, Brooklyn Bridge, etc. RPI's CEE Department is the only department in the world to receive this high recognition.
- Led successful fundraising campaigns to provide needed funds for departmental miscellaneous activities, laboratory renovation, student scholarships, etc.
- Organized and implemented aggressive public relation campaign throughout FY2010 that included mailings, web site and other external local and national communications, which lead to improving department national ranking from 34th to 26th.

- Successfully negotiated increasing the department designated office and laboratory spaces to meet the department growth in faculty size and research grants.
- Technical Director of RPI's CEES (Center for Earthquake Engineering Simulation), with about $1.5 M of funded research per year (2009-2010).
- Co-leader of a $7 million project funded by NIST Technology Innovation Program (TIP), "*Development of a Multi-Scale Monitoring and Health Assessment Framework for Effective Management of Levees and Flood-Control Infrastructure Systems*". The project aims at monitoring and assessing large distributed infrastructure systems in varying stages of deterioration, which are critical for extending lives of these critical systems and the development of sustainable systems.

Associate Professor & Associate Director, RPI's NEES Geotechnical Centrifuge Research Center.	Dept of Civil & Env. Engineering Rensselaer Polytechnic Institute	2006-2009

- Supervised the operation of RPI's NEES (Network for Earthquake Engineering Simulation) geotechnical centrifuge center.
- Led the physical modeling effort for modeling the New Orleans failed levees as part of the U.S. Army IPET task force. Currently leading a research study to evaluate new designs used in the New Orleans levees reconstruction.
- Lead the physical testing (centrifuge and full scale) in two NEESR-SG projects studying piles and pipe lines in collaboration with UB and Cornell facilities, respectively.
- Participation as PI or co-PI in several successful research proposals to DHS, NSF, U.S. Army and FHWA with a total funding of $5.5 million ($4.5 million RPI share).

Assistant Professor & Associate Director, RPI's NEES Geotechnical Centrifuge Research Center.	Dept of Civil & Env Engineering Rensselaer Polytechnic Institute	2004-2006

- *Patent* for "Shape-Acceleration Measurement Device and Method for Real-Time Field Monitoring (www.measurand.com)" Danisch, L.A., Lowery-Simpson, M.S. and Abdoun, T., June 2004.
- Supervised the operation of RPI's NEES (Network for Earthquake Engineering Simulation) geotechnical centrifuge Center.
- Participated as PI or co-PI in several successful research proposals to NSF. MCEER, U.S. Army, FHWA and PEER.
- Participated as co-PI in two successful NEES Operation and Maintenance proposals: 1) NEES NSF award to RPI centrifuge for approximately $4 million over five years (2004-09), and 2) NEES NSF award to Cornell/RPI for approximately $2.8 million ($0.5 million RPI share) over two years (2004-2009).

Research Assistant Professor & Manager, RPI's Geotechnical Centrifuge Research Center.	Dept. of Civil & Env Engineering Rensselaer Polytechnic Institute	1998-2004

- Managed NEES (Network for Earthquake Engineering Simulation) project for upgrading RPI geotechnical centrifuge and convert it into experimental node of NEES research consortium, toward 10-year NSF national effort (2004-2014).
- Taught graduate and undergraduate courses on Advanced Foundations and Slope Stability, and Advanced Soil Mechanics and assisted on geotechnical aspects of senior capstone design course.
- Participated as PI or co-PI in several successful research proposals to NSF. MCEER, U.S. Army, FHWA and PEER with a total of $1.7 million.
- Participation as co-PI in two successful equipment proposals: 1) NEES NSF award to RPI centrifuge for approximately $2.7 million over four years (2000-2004), and 2) NEES NSF award to Cornell/RPI for approximately $2.1 million ($0.3 million RPI share) over two years (2002-2004).
- Supervised and conducted geotechnical and environmental research for academic and industrial users of RPI's state-of-the-art geotechnical centrifuge research facility.

CONSULTANT

- Conduct evaluation of the Vulnerability of Offshore Pipelines to Blast Loading for HESS Co., (2008-2009).
- Consultant, South Korea Advanced Institute of Science and Technology (KAIST) on the design and construction of a state-of-the-art centrifuge facility. The planned KAIST facility will include a geotechnical centrifuge of 5.0 m radius equipped with 2D shaking table and in-flight robot.
- Review and evaluate the design and performance of 1D shaker and laminar container for US Army Corps of Engineers Centrifuge Facility (largest centrifuge in the world).
- Conduct evaluation of the Offshore Geotechnical Investigation of Wind Farms for General Electric (GE), (2003-2004).
- Consultant, U. S. Army Corps of Engineers on Liquefaction and Seismic Embankment Issues.
- Participated in construction of pile foundations and conduct several pile load tests, (1991-1992).
- Participated in structural and foundation design of multistory building in downtown Cairo, (1991-1992).

HONORS & AWARDS

- Recipient of the 2018 ***ASCE Thomas A. Middlebrooks*** best paper award, which is the top ASCE geotechnical paper prize for the year. The award was given for the journal paper titled *"Two Case Histories Demonstrating the Effect of Past Earthquakes on Liquefaction Resistance of Silty Sand"*.

- Recipient of the 2017 ***ASCE Thomas A. Middlebrooks*** paper excellence award, which is the top ASCE geotechnical paper prize for the year. The award was given for the journal paper titled *"Cyclic Shear Strain Needed for Liquefaction Triggering and Assessment of Overburden Pressure Factor Kσ."*
- Received the Editor's Choice recognition in the June 2017 issue of the ASCE Journal of Geotechnical and Geoenvironmental Engineering. paper titled *"Two Case Histories Demonstrating the Effect of Past Earthquakes on Liquefaction Resistance of Silty Sand"*
- Recipient of the 2016 American Society of Engineer Education (ASEE) Saint Lawrence Section (North East USA & Eastern Canada) ***"ASEE Outstanding Teaching Award"*** for the successful development and implementation of mixed reality mobile game "geo-explorer" in undergraduate education.
- RPI school of Engineering 2016 ***"Education Innovation Award"*** in recognition of the outstanding efforts and great success in the development and implementation of innovative teaching techniques in the field of Engineering.
- Recipient of 2015 ***Wharton-QS Stars Reimagine Education Bronze Award*** for the successful development and implementation of web-based education module for integrating state-of-the-art experimental facilities in undergraduate education at remote campuses. The award is administrated by UPENN and receives over 500 nominations annually for eight award categories. This award is for the Engineering & IT Education category.
- Recipient of 2013 Chi Epsilon, The National Civil Engineering Honor Society, "***Excellence in Teaching"*** award for the Northeast Region.
- Named one of the top School of Engineering faculty with more than $1M in research expenditures/awards for FY12, FY13 & FY14.
- Recipient of RPI Board of Trustees' 2012 "***Outstanding Teacher Award***". The award recognizes faculty outstanding accomplishments in classroom instruction and teaching innovation. The selection is made based on evidence of sustained outstanding teaching as reflected by student evaluations, alumni and peer faculty.
- ***Appointed Member*** of the international committee for "Safety of Levees, Dams, Shore Protection and Land Reclamation" (2010-2012).
- Named the ***Judith and Thomas Iovino Chair Professor*** in Civil and Environmental Engineering.
- Recipient of the ***American Society of Civil Engineers (ASCE) Walter L. Huber Civil Engineering Research Prize*** **for 2009**. The award is in recognition of the significant contributions to the study of soil and soil-structure systems subjected to extreme events using centrifuge modeling and advanced instrumentation as well as his innovative and highly creative research.
- ***Winner*** of the international competition for predicting levees response that included over forty competitors. The competition was organized by Deltares, Netherlands as part of the Project De IJkdijk (The Calibration Dike) funded by EU to enhance levees design and monitoring in Europe.
- Elected President of the Network of Earthquake Engineering Simulation (NEES) Consortium (2009-2012).

- Recipient of RPI's School of Engineering Excellence in ***Teaching Award*** for 2008. The award recognizes faculty for outstanding teaching performance and contributions.
- Recipient of RPI's School of Engineering Excellence in ***Collaborative Research Award*** for 2007 & 2008.
- Recipient of RPI's School of Engineering ***Recognition for Excellence*** in supporting undergraduate research. The award recognizes faculty effort for encouraging undergraduate student participation in advanced research.
- Recipient of "***Commander's Award*** for Public Service with accompanying medal." This medal is the highest awards given by the US Army to Civilians who provided outstanding services to the US Army. This award is in appreciation for his support of the New Orleans Recovery through efforts with the Evaluation Task Force of the Hurricane Katrina Interagency Performance (IPET).
- Recipient of "***Certificate of Recognition***" on behalf of the Project Director, Technical Director, and Team Leads. This award is in recognition of the leadership and dedication provided to the IPET effort.
- Recipient of 2007 ***Shamsher Prakash International Research Award*** for young engineers, scientists and researchers. The award is given to specialists who have significant independent contributions and showed promise of excellence in Geotechnical Engineering and/or Geotechnical Earthquake Engineering.
- ***Invited Article***, Geotechnical News Magazine – Geotechnical Instrumentation News (T. Abdoun and V. Bennett, (2008) "A New Wireless MEMS-Based System for Real-Time Deformation Monitoring, *Geotechnical News Magazine*, Vol 26, No 1.).
- Recipient of NEES Award for "***Best IT Innovation***" for 2007, for the development of interactive 3D viewer for advanced educational and research applications.
- Recipient of RPI's Institute 22nd ***Early Career Award*** for Outstanding Contribution in Teaching & Research for 2007.
- Recipient of RPI's ***Trustee Board Recognition*** of Faculty Achievement for four years in a row 2004, 2005, 2006, 2007 and 2008.
- Led RPI's physical modeling research activities for New Orleans Levees. RPI's research findings were shown on national networks (CNN, NBC, Discovery, ASCE News, Times, etc.) and featured in the National Academy of Engineering's Spring 2007 issue of The Bridge, in John Christian's article, "Lessons from Hurricane Katrina".
- Recipient of CSCE's (Canadian Society for Civil Engineering) ***Casimir Gzowski Medal*** for best journal paper for 2004 entitled "Numerical model verification and calibration of George Massey Tunnel using centrifuge models", which was published in Volume 41, No. 5 issue of the Canadian Geotechnical Journal.
- Recipient of RPI's School of Engineering Excellence in ***Research Award*** for 2004.
- ***Patent*** for "Shape-Acceleration measurement Device and Method for Real-Time Field Monitoring" Danisch, L. A., Lowery-Simpson, M. S. and Abdoun, T., June, 2004.
- Two page article in the Technology Advances section of ASCE News Magazine covering the newly developed Shape-Acceleration sensor for real time field monitoring of geotechnical system. (ASCE News Magazine, Technology Advances Section, September, 2004, pp. 30-31).

SELECTED INVITED LECTURES / PRESENTATIONS

- Invited International Webinar Lecture "Effect of Past Earthquakes on Liquefaction Resistance of Silty Sand demonstrated by Case Histories & Physical Model Testing" organized by Geo-Institute Earthquake Engineering and Soil Dynamics International committee, August 15, 2017.
- Invited Keynote Lecture "Recent Advances in Physical Modeling & Remote sensing of Civil Infrastructure Systems," GeoMEast International Congress and Exhibition: Sustainable Civil Infrastructures: Innovative Infrastructure Geotechnology, Sharm El-Sheik, Egypt, July 15-19, 2017.
- Invited Lecture, "Recent Advances in Physical Modeling & Remote sensing of Civil Infrastructure Systems" Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, Dec. 15th, 2016.
- Invited Keynote Lecture "Engineering Investigation of Levees Performance Under Extreme Natural Hazards" 1st International Conference on Natural Hazards and Infrastructure, Greece, June, 2016.
- Invited Lecture "Research Findings on Liquefaction Triggering in Sands During Earthquakes" ASCE Geo-Institute New York City Chapter, March 22nd, 2016.
- Invited Speaker "Instrumentation for Dams: Developing and Implementing Properly Focused, Cost-Effective Monitoring Programs". United States Society on Dams Workshop, Oakland, CA, November, 2015.
- Invited Lecture "Remote Sensing and Health Assessment of Critical Infrastructure Systems" ASCE Geo-Institute Los Angeles Chapter, April, 2014.
- Invited Lecture "State of the art of Physical Modeling of Soil Properties and Behaviour" International Conference on Physical Modeling in Geotechnics, Perth, Australia, January, 2014.
- Invited Speaker "State of the Art of Physical Modeling and Health Assessment of Critical Infrastructure" Syracuse University, NY, Nov. 2, 2012.
- Invited Speaker "State of the Art of Physical Modeling and Health Assessment of Critical Infrastructure" Kasetsart University, Bangkok, Thailand, Dec. 14, 2012.
- Invited Speaker "State of the Art of Physical Modeling and Health Assessment of Critical Infrastructure" Los Andes University, Colombia, Oct. 19, 2012.
- Invited Speaker "Vision for Levee Monitoring and Health Assessment Research Needs" DHS & US Army Dams Sector R&D Workshop, Vicksburg, Mississippi, Jan. 31st - Feb. 1st, 2012.
- Invited Keynote Lecture, "Advanced Real-time Monitoring and Health Assessment of Geotechnical Systems" International Conference on Advances in Ground Technology and Geo-Information, Singapore, Dec. 1-2, 2011.
- Invited Keynote Presentation "Development of a Multi-scale Monitoring and Health Assessment for Flood-Control Infrastructure Systems" International workshop on Intelligent Dike Monitoring for The 21st century – Experience in Embankment Monitoring, Amsterdam, The Netherlands, Nov. 3-4, 2011.
- Invited Keynote Lecture, "MEMS Based Real-Time Monitoring System for Geotechnical Structures" The Indian Geotechnical Conference (IGC) Geo-trendz, Mumbai, India, Dec. 16-18, 2010.

- Invited Lecture, "State of the Art of Physical Modeling and Health Assessment of Critical Infrastructure" National University of Singapore (NUS), Dec. 8th, 2009.
- Invited Webinar Lecture, "Sensor Aided Assessment of Active Soil Systems Based on Lessons Learned from Hurricane Katrina," Hosted by Clough Harbour & Associate, April, 2009.
- Invited Lecture, on Physical modeling of soil structure systems, Cambridge University, London, England, August 1st, 2008.
- Testified to American Society of Civil Engineers (ASCE), on the Physical modeling of New Orleans Floodwall and Levee Performance during Hurricane Katrina, US Army Engineer Research & Development Center ERDC, Vicksburg, MS, March 9-10, 2006.
- Testified to National Academies review committee (NRC) that advises the US congress, on the Physical modeling of New Orleans Floodwall and Levee Performance during Hurricane Katrina, New Orleans, LA, March 20-21, 2006.
- Invited Speaker, Modeling of New Orleans levee failure during Hurricane Katharina, Intl. Conf. on Physical Modeling in Geotechnics, ICPMG, Hong Kong, August 4-6, 2006.
- Invited speaker, "Innovative Technologies for Earthquake Disaster Mitigations" Symposium for the 10th Anniversary Earthquake Engineering Society at Korea (EESK), Soul National University, Soul, Korea, September 21-22, 2006.
- Dinner Guest Speaker, Hurricane Katrina Floodwall and Levee Performance Analysis, New York State Association of Transportation Engineers (NYSATE), November 29, 2006.
- Dinner Guest Speaker, Modeling of Civil Infrastructure Systems, RPI's Board of Trustees, Troy, Dec. 7th, 2006.
- Invited Author, "RPI 3D Visualization Tools" Seismos Publication by NEESit team at the UC San Diego Super Computer. (Seimos, Vol. 1, Issue 3, April 2005).
- Two page article in the Technology Advances section of ASCE News Magazine covering the newly developed Shape-Acceleration sensor for real time field monitoring of geotechnical system. (ASCE News Magazine, Technology Advances Section, September, pp. 30-31).
- Invited speaker, NEES Annual Consortium Meeting, San Diego, May 20-21, 2004.
- Invited speaker, Earthquake Geotechnical Engineering Workshop, organized as part of the XV International Conference on Soil Mechanics and Geotechnical Engineering held in Istanbul, Turkey, August 27-31, 2001.

PUBLICATIONS

1. Refereed Journals

1. Okamura, M., Abdoun, T., Dobry, R., Sharp, M.K., and Taboada, V.M., (2001), "*Effects of Sand Permeability and Weak Aftershocks on Earthquake-Induced Lateral Spreading*," Soils and Foundations, Vol.41, No. 6, December, pp. 63-77.
2. Abdoun, T. and Wang, Y., (2002), "*Physical Modeling and Evaluation of Pile Foundation Retrofitting Against Lateral Spreading and Inertial Effects During*

Liquefaction," International Journal of Physical Modeling and Geotechnics, Vol. 2, No. 3, pp. 17-28.

3. Gonzalez, L., Abdoun, T., and Sharp, M., (2002), "*Modeling of Seismically Induced Liquefaction Under High Confining Stress*," International Journal of Physical Modeling and Geotechnics, Vol. 2, No. 3, pp. 1-15.
4. Abdoun, T. and Dobry, R., (2002), "*Evaluation of Pile Foundation Response to Lateral Spreading,*" Soil Dynamics and Earthquake Engineering, Vol. 22, No. 9-12, pp. 1051-1058.
5. Taboada-Urtuzuastegui, V.M., Martinez-Ramirez, G., and Abdoun, T., (2002), "*Centrifuge Modeling of the Seismic Behavior of a Slope in Liquefiable Soil*," Soil Dynamics and Earthquake Engineering, Vol. 22, No. 9-12, pp. 1043-1049.
6. Sharp, M., Dobry, R., and Abdoun, T., (2003), "*Centrifuge Modeling of Liquefaction and Lateral Spreading of Virgin, Overconsolidated and Pre-shaken Sand Deposits*," International Journal of Physical Modeling and Geotechnics, Vol. 3, No. 2, pp. 11-22.
7. Adalier, K., Abdoun, T., Dobry, R., Phillips, R., Yang, D., and Naesgaard, E., (2003), "*Centrifuge Modeling For Seismic Retrofit Design of an Immersed Tube Tunnel*," International Journal of Physical Modeling and Geotechnics, Vol. 3, No. 2, pp. 23-36.
8. Abdoun, T., Dobry, R., O'Rourke, T.D., and Goh, S.H., (2003), "*Pile Response to Lateral Spreads: Centrifuge Modeling*," ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol. 129, No. 10, October, pp. 869-878.
9. Dobry, R., Abdoun, T., O'Rourke, T.D., and Goh, S.H., (2003), "*Piles in Lateral Spreading: Field Bending Moment Evaluation*," ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol. 129, No. 10, October, pp. 879-889.
10. Sharp, M., Dobry, R., and Abdoun, T., (2003), "*Liquefaction Centrifuge Modeling of Sands of Different Permeability*," ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol. 129, No. 12, December, pp. 1083-1091.
11. Zeghal, M., El Shamy, U., Shephard, M., Dobry, R., Fish, J., and Abdoun, T., (2003), "*Micro-Mechanical Analyses of Saturated Granular Soils,*" Multiscale Computational Engineering, Vol. 1, No. 4, pp. 441-460.
12. Byrne, P.M., Park, S., Beaty, M., Sharp, M., Gonzalez, L., and Abdoun, T., (2004), "*Numerical Modeling of Liquefaction and Comparison with Centrifuge Tests*," Canadian Geotechnical Journal, Vol. 41, No. 2, April, pp. 193-211.
13. Yang, D., Naesgaard, E., Byrne, P., Adalier, K., and Abdoun, T., (2004), "*Numerical Model Calibration of George Massey Tunnel Using Centrifuge Models*," Canadian Geotechnical Journal, Vol. 41, No. 5, September, pp. 921-942.
14. Abdoun, T., Dobry, R., Zimmie, T., and Zeghal, M., (2005), "*Centrifuge Research of Countermeasures to Protect Pile Foundations Against Liquefaction-Induced Lateral Spreading*," Journal of Earthquake Engineering, Vol. 9, No. 1, June, pp. 105-125.
15. Gonzalez, L., Abdoun, T., Zeghal, M., Kallou, P.V., and Sharp, M., (2005), "*Physical Modeling and Visualization of Soil Liquefaction under High Confining Stress*," Journal of Earthquake Engineering and Engineering Vibration, Vol. 4, No. 1, June, pp. 63-68.
16. O'Rourke, M., Gadicherla, V., and Abdoun, T., (2005), "*Centrifuge Modeling of PGD Response of Buried Pipe*," Journal of Earthquake Engineering and Engineering Vibration, Vol. 4, No. 1, June, pp. 69-73.

17. Zeghal, M., Kallou, P.V., Oskay, C., Abdoun, T., and Sharp, M.K., (2006), "*Identification and Imaging of Soil and Soil-Pile Deformation in the Presence of Liquefaction*," Journal of Earthquake Engineering and Engineering Vibration, Vol. 5, No. 4, Dec., pp. 171-182.
18. Bennett, V., Zeghal, M., Abdoun, T., and Danisch, L., (2007), "*A Wireless Shape-Acceleration Array System for Local Identification of Soil and Soil-Structure System*," Transportation Research Record: Journal of the Transportation Research Board, Soil Mechanics 2007, No. 2004, pp. 60-66.
19. Gallagher, P.M., Pamuk, A., and Abdoun, T., (2007), "*Stabilization of Liquefiable Soils Using Colloidal Silica Grout*," ASCE Journal of Materials in Civil Engineering, Vol. 19, No. 1, January, pp. 33-40.
20. Choo, Y.W., Abdoun, T., O'Rourke, M.J., and Ha, D., (2007), "*Remediation for Buried Pipeline Systems Under Permanent Ground Deformation*," Soils Dynamics and Earthquake Engineering, Vol. 27, pp. 1043-1055.
21. Abdoun, T. and González, L., (2007), "*Physical Modeling of Soil-Structure Systems Response to Earthquake Loading*," 10th Anniversary of EESK Special Issue of Journal of Earthquake Engineering Society at Korea (EESK), pp. 43-51.
22. Ubilla, J., Abdoun, T., Sasanakul, I., Sharp, M., Steedman, S., and Vanadit-Ellis, W., (2008), "*New Orleans Levee System Performance during Hurricane Katrina: London Avenue and Orleans Canal South*," ASCE Journal of Geotechnical and Geoenvironmental Engineering: Special Issue on the Performance of Geo-Systems during Hurricane Katrina, Vol. 134, No. 5, May, pp. 668-680.
23. Sasanakul, I., Vanadit-Ellis, W., Sharp, M.K., Abdoun, T.H., Ubilla, J.O., Steedman, R.S., and Stone, K.J.L., (2008), "*New Orleans Levee System Performance during Hurricane Katrina: 17th Street Canal and Orleans Canal North*," ASCE Journal of Geotechnical and Geoenvironmental Engineering: Special Issue on the Performance of Geo-Systems during Hurricane Katrina, Vol. 134, No. 5, May, pp. 657-667.
24. Ha, D., Abdoun, T., O'Rourke, M. J., Symans, M. D., O'Rourke, T. D., Palmer, M.C., and Stewart, H.E., (2008), "*Centrifuge Modeling of Permanent Ground Deformation Effects on Buried HDPE Pipelines*," ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol. 134, No. 10, pp. 1501-1515.
25. Abdoun, T., Ha, D., O'Rourke, M. J., Symans, M. D., O'Rourke, T. D., Palmer, M., and Stewart, H. E., (2008), "*Buried HDPE Pipelines Subjected to Normal Faulting-A Centrifuge Investigation*," Canadian Geotechnical Journal, Vol. 45, pp. 1733-1742.
26. Abdoun, T., Ha, D., O'Rourke, M. J., Symans, M. D., O'Rourke, T. D., Palmer, M., and Stewart, H. E., (2009), "*Factors Influencing the Behavior of Buried Pipelines Subjected to Ground Faulting*," Soils Dynamics and Earthquake Engineering, Vol. 29, pp. 415-427.
27. González, L., Abdoun, T., and Dobry, R., (2009), "*Effect of Soil Permeability on Centrifuge Modeling of Pile Response to Lateral Spreading*," ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol. 135, No. 1, pp. 62-73.
28. He, L., Elgamal, A., Abdoun, T., Abe, A., Dobry, R., Hamada, M., Meneses, J., Sato, M., Shantz, T., and Tokimatsu, K., (2009), "*Lateral Load on Single Piles Due To Liquefaction-Induced Lateral Spreading*," Journal of Earthquake Engineering, Vol. 13, No. 7, pp. 916–938.

29. Thevanayagam, S., Dobry, R., Abdoun, T., Elgamal, A., Zeghal, M., and El-Shamy, U. (2009), "*1-g Laminar Box System for Physical Modeling of Liquefaction and Lateral Spreading*," ASTM Geotechnical Testing Journal, Vol. 32, No. 5.
30. Bennett, V., Abdoun, T., Shantz, T., Jang, D., and Thevanayagam, S., (2009), "*Design and Characterization of a Compact Array of High-Resolution MEMS Accelerometers for Instrumenting Soil and Soil-Structure Systems*," Smart Structures and Systems Journal, Vol. 5, No. 6, November.
31. Palmer, M.C., O'Rourke, T.D., Olson, N.A., Abdoun, T., and Ha, D., (2009), "*Tactile Pressure Sensors for Soil-Structure Interaction Assessment*," ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol. 135, No. 11, November, pp. 1638-1645.
32. Ha, D., Abdoun, T., O'Rourke, M. J., Symans, M. D., O'Rourke, T.D., and Stewart, H.E., (2010), "*Earthquake Faulting Effects on Buried Pipeline - Case History and Centrifuge Study*," Journal of Earthquake Engineering, Vol. 14, Issue 5, June, pp. 646-669.
33. El Shamy, U., Zeghal, M., Dobry, R., Thevanayagam, S., Elgamal, A., Abdoun, T., Medina, C., Bethapudi, R., and Bennett, V., (2010), "*Micromechanical Aspects of Liquefaction-induced Lateral Spreading*," ASCE International Journal of Geomechanics, Vol. 10, No. 5, September-October, pp. 190-201.
34. Dobry, R., Thevanayagam, S., P.E., Medina, C., Bethapudi, R., Elgamal A., Bennett, V., Abdoun, T., Zeghal, M., and El Shamy, U., (2011), "*Mechanics of Lateral Spreading Observed in Full-Scale Shake Test*," ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol. 137, No. 2, pp. 115-129.
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130. El-Sekelly, W., Abdoun, T., Dobry, R. (2018). "*Experimental simulation of the effect of preshaking on liquefaction of sandy soils"*, 9th International Conference on Physical Modelling in Geotechnics, London, UK, 17th – 20th July 2018
131. Kokkali, P., Abdoun, T., Tessari, A. (2018). "*Image capture and motion tracking applications in geotechnical centrifuge modeling*", 9th International Conference on Physical Modelling in Geotechnics London, UK, 17th – 20th July 2018
132. El-Shafee O., Lawler J., Abdoun T. (2018) "Centrifuge modeling of site response and liquefaction using a 2D laminar box and biaxial dynamic base excitation", 9th International Conference on Physical Modelling in Geotechnics London, UK, 17th – 20th July 2018
133. T. Carey, A. Gavras, B. Kutter, S.K. Haigh, S.P.G. Madabhushi, M. Okamura, D.S. Kim, K. Ueda, W.Y. Hung, Y.G. Zhou, K. Liu, Y.M. Chen, M. Zeghal, T. Abdoun, S. Escoffier, & M. Manzari (2018) "A new shared miniature cone penetrometer for centrifuge testing" 9th International Conference on Physical Modelling in Geotechnics London, UK, 17th – 20th July 2018

(d) Non-refereed Conferences Proceedings

1. Abdoun, T., Dobry, R., O'Rourke, T. D. and Chaudhuri, D., (1996), *"Centrifuge Modeling of Seismically-Induced Lateral Deformation During Liquefaction and Its Effect on Pile Foundation,"* Proceedings of the 6th Japan-US Workshop on Earthquake Resistant Design of Lifeline Facilities and Countermeasures Against Soil Liquefaction, Waseda University, Tokyo, Japan, June 11- 13, pp. 525-539.
2. Abdoun, T., Dobry, R. and O'Rourke, T. D., (1996), *"Evaluation of Pile Response Due to Liquefaction Induced Lateral Spreading of the Ground,"* Proceedings of the Fourth Caltrans Seismic Research Workshop, Sacramento, CA, July 9-11, 10 pages.
3. Dobry, R., Abdoun, T. and O'Rourke, T. D., (1997), *"Numerical and Physical Modeling of Dynamic Soil-Pile Interaction during Soil Liquefaction,"* Proceedings of the Session on Physical and Numerical Modeling of Deep Foundations, T. Nogami (ed), First National Conference of Geo-Institute, ASCE, Logan, Utah, July 16-19, 15 pages.
4. Ramos, R., Abdoun, T. and Dobry, R., (1999), *"Centrifuge Modeling of Effect of Superstructure Stiffness on Pile Bending Moments Due to Lateral Spreading,"* Proceedings of the 7th U.S. – Japan Workshop on Earthquake Resistant Design of Lifeline Facilities and Countermeasures Against Liquefaction, Technical Report MCEER-99-0019, Seattle, WA, , August 15-17, pp. 599-608.
5. Lee, C-J., Dobry, R., Abdoun, T. and Wu, B-R., (1999), *"Lateral Spreading Behind a Caisson Type Quay Wall During Earthquake,"* Proceedings of the 7th U.S. – Japan

Workshop on Earthquake Resistant Design of Lifeline Facilities and Countermeasures Against Liquefaction, Technical Report MCEER-99-0019, Seattle, WA, August 15-17, pp. 533-547.

6. González, L., Dobry, R., Abdoun, T. and Zeghal, M., (2002), *"Centrifuge Modeling of the Seismic Response of Soil Systems,"* Proceedings of the 8th Chilean Conference on Seismology and Earthquake Engineering, Valparaiso, Chile, April 25-27.
7. O'Rourke, M. J., Gadicherla, V. and Abdoun, T., (2002), *"Centrifuge Modeling of PGD Response of Buried Pipelines,"* Proceedings of the 8th U.S.-Japan Workshop on Earthquake Resistant Design of Lifeline Facilities and Countermeasures against Liquefaction, Tokyo, Japan, December 16-18.
8. Pamuk, A., Abdoun, T. and Gallagher, P.M., (2002), *"Evaluation of Passive Site Remediation Against Earthquake induced Liquefaction and its Hazards Effect on Deep Foundations,"* Proceedings of the 8th U.S.-Japan Workshop on Earthquake Resistant Design of Lifeline Facilities and Countermeasures against Liquefaction, Tokyo, Japan, December 16-18.
9. Abdoun, T., Wang, Y. and Dobry, R., (2002), *"Performance of Retrofitted Pile Foundations Subjected to Seismically Induced Lateral Spreading,"* Proceedings of the 8th U.S.-Japan Workshop on Earthquake Resistant Design of Lifeline Facilities and Countermeasures against Liquefaction, Tokyo, Japan, December 16-18.
10. Zeghal, M., Abdoun, T. and Oskay, C., (2004), *"A Novel Shape-Acceleration Array and Local Identification of Geotechnical Systems,"* International Workshop for Site Selection, Installation and Operation of Geotechnical Strong-Motion Arrays: Inventory of Current and Planned Arrays, Los-Angeles, October 14-15.
11. González, L., Dobry, R. and Abdoun, T., (2004), *"Modelamiento Con Centrifuge De La Respuesta De Pilotes De Fundacion Al Corrimiento Lateral De Suelos Licuados,"* Proceedings of V Chilean Conference of Geotechnics, Santiago, Chile, November 24-26.
12. González, L., Kallou, P. V., Abdoun, T., Zeghal, M. and Sharp, M. K., (2004), *"Centrifuge Modeling and Visualization of Seismically Induced Liquefaction under High Confining Stress,"* Proceedings of V Chilean Conference of Geotechnics, Santiago, Chile, November 24-26.
13. González, L., Abdoun, T. and Dobry, R., (2005), *"Effect of Soil Permeability on Centrifuge Modeling of Pile Response to Lateral Spreading,"* Workshop Pile Foundations in Liquefied and Lateral Spreading Ground, UC Davis, CA, March 16-18.
14. González, L. and Abdoun, T., (2005), *"Centrifuge Modeling of Pinning Reinforcement Effect on Lateral Spreading,"* Congreso Chileno de Sismología e Ingeniería Antisísmica IX Jornadas, Santiago, Chile, November 16-19.
15. Abdoun, T. and González, L., (2006), *"Physical Modeling of Soil-Structure Systems Response to Earthquake Loading,"* Symposium for the 10th Anniversary Earthquake Engineering Society at Korea (EESK), Soul National University, Soul, Korea, September 21-22.
16. Danisch, L., Abdoun, T., Bennett, V., Patterson, T., Lowery-Simpson, M., Shantz, T., Jang, D. and Barendse, M., (2007), *"Performance of MEMS Sensor Arrays Autonomously Monitoring 3D Soil Displacement,"* Proceedings of the AEG 50th Annual Meeting, Los Angeles, CA, September 24-29.

17. Dobry, R., Abdoun, T., Elgamal, A., Thevanayagam, S. and Zeghal, M., (2011), "*Integration of Centrifuge Tests, Full Scale Tests, and Field Case Histories to Improve Liquefaction Prediction Tools,*" NEES Activity Highlights, 2010-2011, Julio A. Ramirez, ed.), NEEScom, W. Lafayette, IN, pp. 48-49
18. El Ganainy, H., Abdoun, T., Dobry, R. and Thevanayagam, S., (2011), *"Integration of Sand Liquefaction Produced in Centrifuge Tests, Full Scale Tests, and Field Case Histories during Actual Earthquakes,"* Quake Summit 2011 – Earthquakes and Multi-Hazards Resilience: Progress and Challenges, Buffalo, NY, June 9-11.

PROFESSIONAL AFFILIATION / ACTIVITIES

- Spring of 2013, Elected Faculty member of Chi Epsilon national Civil Engineering honor society that was founded in 1922.
- Scientific Committee Member for the 2nd European Conference on FLOODrisk Management, Rotterdam, the Netherlands, Nov. 20th-22nd, 2012.
- Appointed member of the international committee for "Safety of Levees, Dams, Shore Protection and Land Reclamation".
- Elected Member of the NEES Consortium Advisory Committee (2009-2012).
- Elected President of the NEES Equipment Sites Forum (2009-2012).
- Associate Editor, Canadian Geotechnical Journal (2007-2010).
- Member, ASCE Geo Institute Committee for Earthquake Engineering and Soil Dynamics.
- Editorial Board Member, for the ASCE Journal of Geotechnical and Geoenvironmental Engineering.
- Member, Editorial Board for the International Journal of Physical Modeling in Geotechnics.
- Member, Editorial Board for the International Journal of Geomechanics & Engineering.
- Elected Member of The NY Academy of Science 2008.
- Elected Member of the NEES Equipment Site Operations Committee (SOC) (2004-2009).
- Member, American Society for Civil Engineers.
- Member, American Society of Engineering Education.
- Member, Consortium of Universities for Research in Earthquake Engineering (CUREE).
- Member, NEES Consortium & USUCGER.
- Member, Egyptian Society for Civil Engineers.
- Review papers submitted for publication in ASCE, ASTM and ASME Journals.
- Participated in NSF proposal review panels.