CURRICULUM VITAE OF GEORGE DEODATIS

Current Academic Position:

Santiago and Robertina Calatrava Family Professor, Department of Civil Engineering and Engineering Mechanics, Columbia University.
Chair, Department of Civil Engineering and Engineering Mechanics, Columbia University.

Education:

Ph.D., 1987, Civil Engineering, Columbia University.
Master of Science, 1984, Civil Engineering, Columbia University.
Diploma, 1982, Civil Engineering, National Technical University of Athens.

Professional Experience:

Chair, July 2013 – present, Columbia University.
Santiago and Robertina Calatrava Family Professor, September 2007 – present, Columbia University.
Professor, July 2002 – August 2007, Columbia University.
Associate Professor (with tenure), January 2002 – June 2002, Columbia University.
Director, Program in Mechanics, Materials & Structures, July 1997 - June 1999, Princeton University.
Associate Professor (with tenure), July 1997 - December 2001, Princeton University.
Assistant Professor, July 1991 - June 1997, Princeton University.
Research Associate, February 1988 - June 1991, Princeton University.
Post-Doctoral Research Scientist, June 1987 - January 1988, Columbia University.

Honors and Awards for Research:

- Engineering Mechanics Institute of the American Society of Civil Engineers, Fellow, 2014.
- American Society of Civil Engineers Walter Huber Civil Engineering Research Prize, 1998.
- International Association for Structural Safety and Reliability Junior Research Prize, 1997.
- National Science Foundation Young Investigator Award, 1992.
- NEC Preceptorship, 1995.
- Howard B. Wentz Award, 1994.

Honors and Awards for Teaching:

- Society of Columbia Graduates Great Teacher Award, 2011.
- Columbia University's Presidential Award for Outstanding Teaching, 2009.

- Columbia University's Engineering School Alumni Association Distinguished Faculty Teaching Award, 2003.
- Princeton University's President's Award for Distinguished Teaching, 1995.
- Princeton University's E-Council Lifetime Achievement Award for Excellence in Teaching, 2001.
- Princeton University's E-Council Excellence in Teaching Award, 1992, 1993, 1996, 1997, 1998, 2000 (six-time winner).
- Educator of the Year, American Society of Civil Engineers, New Jersey Section, 1999.

Interviewed/Quoted by (partial list):

Washington Post (2/19/2014), Bloomberg (12/6/2012), The Guardian (11/22/2012), Mother Jones (7/29/2013), New York Magazine (3/7/2010), New York Times (10/27/2013), Village Voice (10/1/2008), Huffington Post (10/29/2014).

Research Interests:

Probabilistic mechanics, simulation of stochastic processes and fields to model uncertain earthquake/wind loads and material/soil properties, earthquake engineering, structural dynamics, random vibrations, reliability and safety analysis of structures, structural collapse mechanisms, stochastic finite element methods, risk assessment and risk management of civil infrastructure systems.

Service to the Profession:

Administrative Positions in Professional Societies:

President of International Association for Structural Safety and Reliability (2009-2013)
Member of Executive Board of International Association for Structural Safety and Reliability (2009-today)
Member of Board of Governors of the Engineering Mechanics Institute of ASCE (2014-today)

Organization of International Conferences:

Chair of the 11th International Conference on Structural Safety and Reliability (2013)

Membership in Editorial Boards of Technical Journals:

Journal of Probabilistic Engineering Mechanics (1999-today).
Journal of Soil Dynamics and Earthquake Engineering (2009-today).
Journal of Engineering Under Uncertainty: Hazards, Assessment & Mitigation (2009-today)
International Journal of Uncertainty Quantification (2010-today)
Journal of Structural Safety (2012-today)
Journal of Structure and Infrastructure Engineering (Book Review Editor: 2008-today)
Journal of Engineering Mechanics, ASCE (Associate Editor: 2000-2002).

Editor of Conference Proceedings:

Fourth International Conference on Computational Stochastic Mechanics, 2003 (co-editor).
Fifth International Conference on Computational Stochastic Mechanics, 2007 (co-editor).
Sixth International Conference on Computational Stochastic Mechanics, 2011 (co-editor).
Seventh International Conference on Computational Stochastic Mechanics, 2015 (co-editor).

Editor of Special Journal Volumes:

Journal of Probabilistic Engineering Mechanics: Special Volume from 4th International Conference on Computational Stochastic Mechanics, 2004 (co-editor).
Journal of Probabilistic Engineering Mechanics: Special Volume from 5th International Conference on Computational Stochastic Mechanics, 2008 (co-editor).
Journal of Probabilistic Engineering Mechanics: Special Volume from 6th International Conference on Computational Stochastic Mechanics, 2012 (co-editor).
Journal of Probabilistic Engineering Mechanics: Special Volume from 7th International Conference on Computational Stochastic Mechanics, 2016 (co-editor).

Committee Membership in Professional Societies:

- International Association for Structural Safety and Reliability: Chair of Umbrella Committee on Stochastic Methods in Structural Engineering, 2007 - 2013.
- International Association for Structural Safety and Reliability: Chair of Subcommittee on Computational Stochastic Mechanics, 2003 - 2007.
- American Society of Civil Engineers Engineering Mechanics Division: Chair and Member of Control Group of the Probabilistic Methods Committee, 2000 - 2002.
- American Society of Civil Engineers Engineering Mechanics Institute: Member of Probabilistic Methods Committee, 2005 - 2011.

Reviewer for Journals (selective list):

ASCE Journal of Engineering Mechanics, ASCE Journal of Structural Engineering, ASME Journal of Applied Mechanics, ASME Journal of Vibration and Acoustics, Earthquake Engineering and Structural Dynamics, Nuclear Engineering and Design, Probabilistic Engineering Mechanics, Soil Dynamics and Earthquake Engineering, Structural Safety, Wind Engineering and Industrial Aerodynamics.

Teaching Experience:

Courses taught:

- The Art of Structural Design (undergraduate - Columbia)
- Mechanics of Solids (undergraduate - Columbia)
- Structural Analysis (undergraduate - Columbia)
- Uncertainty and Risk in Engineering Systems (undergraduate/graduate - Columbia)

- Random Processes in Mechanics (graduate - Columbia)
- Design of Buildings, Bridges and Spacecraft (undergraduate - Columbia)
- Random Vibrations: Applications to Earthquake & Wind Engineering (graduate - Princeton)
- Reliability of Engineering Systems (undergraduate/graduate - Princeton)
- Introduction to Finite Element Methods (undergraduate/graduate - Princeton)
- Mechanics of Solids (undergraduate - Princeton)
- Matrix Structural Analysis (undergraduate - Princeton)
- Analysis and Design of Reinforced Concrete Structures (undergraduate - Princeton)
- Structures and the Urban Environment (preceptor - undergraduate - Princeton)

Ph.D. Students Graduated:

- Bin Liang, 2015 (currently at Bloomberg)
- Madeleine Lopeman, 2015 (currently at Guy Carpenter)
- Brett Benowitz, 2013 (currently at Weidlinger Associates)
- Yunji Hwang, 2013 (currently at Samsung Group)
- Badri Hiriyur, 2012 (currently at Weidlinger Associates)
- Arturo Montoya, 2012 (currently Assistant Professor at the University of Texas, SA)
- Kirubel Teferra, 2011 (currently at Naval Research Laboratory)
- Michael Shields, 2010 (currently Assistant Professor at Johns Hopkins)
- Manuel Miranda, 2009 (currently Assistant Professor at Hofstra University)
- Paolo Bocchini, 2008 (currently Assistant Professor at the Department of Civil and Environmental Engineering at Lehigh University)
- Yuhong He, 2006 (currently at American Express)
- Yuwei Shi, 2006 (currently at Parsons)
- Andreas Rambalakos, 2006 (currently at the Federal Aviation Administration)
- James Tantalla, 2002 (currently at Mueser Rutledge Consulting Engineers)
- Stelios Koutsourelakis, 2002 (Associate Professor at Technical University of Munich)
- Vinita Saxena, 2000 (currently Vice President at Aon Re Services Inc.)
- Raymond Micaletti, 1999 (currently private consultant in Wall Street)
- Lori Graham-Brady, 1996 (currently Professor and Chair, Department of Civil Engineering, Johns Hopkins University)
- Liyang Zhang, 1995 (currently private consultant in Wall Street)
- Derin Ural, 1994 (currently Professor, Department of Civil Engineering, Istanbul Technical University)

Current Ph.D. Students:

- Christos Vlachos (Columbia)
- Jenny Sideri (Columbia)
- Athina Spyridaki (Columbia)
- Maura Torres

Undergraduate Senior Theses Advised to Date:

- Forty one students.

Administrative Responsibilities Within Columbia

- Chair, Department of Civil Engineering and Engineering Mechanics, 2013 – today.
- Chair of Oversight Council of the School at Columbia University, 2014 – today.
- Member of Provost's Committee on Student Learning Outcomes Assessment, 2010 – today.
- Member of Columbia College/School of General Studies Committee on Instruction, 2010 – 2014.
- Member of School of Engineering and Applied Science Task Force for Strategic Planning, 2010 – 2011.
- Member of School of Engineering and Applied Science Advisory Committee on Undergraduate Curriculum, 2010 – 2013.
- Member of the Provost's Committee on Quality of Life of the Faculty, 2006 – 2013.
- Member of the Provost's Search Committee for new director of the International Students and Scholar's Office, 2010 – 2011.
- Member of School of Engineering and Applied Science ABET Committee, 2010 – 2013.
- Member of University Ad Hoc Committees for the promotion of a faculty member to the tenure ranks.
- Member and/or Chair of various SEAS Ad Hoc Committees for the promotion of faculty members in the School of Engineering and Applied Science to the tenure ranks.
- Member of Steering Committee, Center for Hazards and Risk Research of the Earth Institute, 2002 – 2008.
- Member of Dean's Committee for First Two Years, School of Engineering and Applied Science, 2002 – 2003.
- Member of Mission Statement Subcommittee of the School of Engineering and Applied Science, 2003.
- Member of Dean's Committee for Computational Biology, School of Engineering and Applied Science, 2004.
- Member of Dean's Committee for ABET accreditation, 2005 – 2006.
- Member of University's Classroom Subcommittee, 2010.
- Member of the Provost's Committee on Housing, 2007 – 2009.
- Member of the President's Task Force on Undergraduate Education, 2006 – 2009.
- Member of the Dean's Committee for Diversity in Engineering, 2005 – 2008.
- Chair, Department of Civil Engineering and Engineering Mechanics Search Committee for new faculty positions, 2009 – 2010.
- Chair/Member of Various Committees within the Department of Civil Engineering and Engineering Mechanics, the most important being the ABET certification one (2005 – today).

Administrative Responsibilities Within Princeton

- Director, Program in Mechanics, Materials, and Structures, Department of Civil Engineering and Operations Research, 1997-1999.
- Advisor for Students in the Classes of '97, '98 and '99 in the Structures & Mechanics and Architecture & Engineering Programs at the Department of Civil Engineering and Operations Research.
- Advisor for Students in the Classes of '01 and '02 (fall semester only) in the Structures & Mechanics Program at the Department of Civil and Environmental Engineering.
- Freshman Advisor for the School of Engineering and Applied Science, 1992-1993, 1993-1994, 1994-1995, 2000-2001 and 2001-2002 (fall semester only).
- Member of the Committee on Examinations and Standing (University Committee), 1993-1994 and 1994-1995.
- Member of the Committee on Course of Study (University Committee), 2000-2001 and 2001-2002 (fall semester only).
- Member of the Committee of the Architecture and Engineering Program (University Committee), 1993-2001.
- Member of the Committee of the Engineering Physics Program (University Committee), 1995-2001.
- Member of the Committee of the Master of Engineering Program (School of Engineering and Applied Science Committee), 1996-1999.

LIST OF PUBLICATIONS OF GEORGE DEODATIS

Books

1. Tassios, T.P. and Deodatis, G. (1984). Practical Design of Reinforced and Prestressed Concrete Structures Against Fire, *National Technical University of Athens Press*, Athens (in Greek).

2. Deodatis, G. and Shinozuka, M. (2017). Simulation of Stochastic Processes and Fields: Theories and Applications, *Cambridge University Press*, New York (to be published).

Chapters in Books

1. Deodatis, G. (1997). "Simulation of Stochastic Processes and Fields to Model Loading and Material Uncertainties," *Probabilistic Methods for Structural Design* (Editor: Carlos Guedes Soares), Kluwer Academic Publishers, pp. 261-288.

2. Deodatis, G. and Graham, L. (1997). "The Weighted Integral Method and the Variability Response Function as Part of a SFEM Formulation," *Uncertainty Modeling in Finite Element, Fatigue and Stability of Systems* (Editors: A. Haldar, A. Guran and B.M. Ayyub), World Scientific, pp. 71-116.

3. Popescu, R., Deodatis, G. and Prevost, J.H. (2008). "Randomly Heterogeneous Soils Under Static and Dynamic Loads," *Reliability–Based Design in Geotechnical Engineering: Computations and Applications* (Editor: K-K. Phoon), Taylor and Francis, Chapter 6, pp. 224-259.

Journal Publications

1. Naganuma, T., Deodatis, G. and Shinozuka, M. (1987). "ARMA Model for Two-Dimensional Processes," *Journal of Engineering Mechanics*, ASCE, Vol. 113, No. 2, pp. 234-251.

2. Shinozuka, M. and Deodatis, G. (1988). "Response Variability of Stochastic Finite Element Systems," *Journal of Engineering Mechanics*, ASCE, Vol. 114, No. 3, pp. 499-519.

3. Shinozuka, M. and Deodatis, G. (1988). "Stochastic Process Models for Earthquake Ground Motion," *Probabilistic Engineering Mechanics*, Vol. 3, No. 3, pp. 114-123.

4. Deodatis, G. and Shinozuka, M. (1988). "Auto-Regressive Model for Nonstationary Stochastic Processes," *Journal of Engineering Mechanics*, ASCE, Vol. 114, No. 11, pp. 1995-2012.

5. Deodatis, G. (1989). "Stochastic FEM Sensitivity Analysis of Nonlinear Dynamic Problems," *Probabilistic Engineering Mechanics*, Vol. 4, No. 3, pp. 135-141.

6. Deodatis, G. and Shinozuka, M. (1989). "Bounds on Response Variability of Stochastic Systems," *Journal of Engineering Mechanics*, ASCE, Vol. 115, No. 11, pp. 2543-2563.

7. Deodatis, G. and Shinozuka, M. (1989). "Simulation of Seismic Ground Motion Using Stochastic Waves," *Journal of Engineering Mechanics*, ASCE, Vol. 115, No. 12, pp. 2723-2737.

8. Deodatis, G., Shinozuka, M. and Neal, D. (1989). "Spatial Strength Variation of Laminated Orthotropic Composites," *Journal of Composite Materials*, Vol. 23, No. 12, pp. 1256-1272.

9. Deodatis, G. (1990). "Bounds on Response Variability of Stochastic Finite Element Systems," *Journal of Engineering Mechanics*, ASCE, Vol. 116, No. 3, pp. 565-585.

10. Deodatis, G. (1990). "Bounds on Response Variability of Stochastic Finite Element Systems: Effect of Statistical Dependence," *Probabilistic Engineering Mechanics*, Vol. 5, No. 2, pp. 88-98.

11. Deodatis, G., Shinozuka, M. and Papageorgiou, A. (1990). "Stochastic Wave Representation of Seismic Ground Motion. I: F-K Spectra," *Journal of Engineering Mechanics*, ASCE, Vol. 116, No. 11, pp. 2363-2379.

12. Deodatis, G., Shinozuka, M. and Papageorgiou, A. (1990). "Stochastic Wave Representation of Seismic Ground Motion. II: Simulation," *Journal of Engineering Mechanics*, ASCE, Vol. 116, No. 11, pp. 2381-2399.

13. Shinozuka, M. and Deodatis, G. (1991). "Simulation of Stochastic Processes by Spectral Representation," *Applied Mechanics Reviews*, ASME, Vol. 44, No. 4, pp. 191-204.

14. Shinozuka, M. and Deodatis, G. (1991). "Stochastic Wave Models for Stationary and Homogeneous Seismic Ground Motion," *Structural Safety*, Vol. 10, Nos. 1-3, pp. 235-246.

15. Deodatis, G. (1991). "Weighted Integral Method. I: Stochastic Stiffness Matrix," *Journal of Engineering Mechanics*, ASCE, Vol. 117, No. 8, pp. 1851-1864.

16. Deodatis, G. and Shinozuka, M. (1991). "Weighted Integral Method. II: Response Variability and Reliability," *Journal of Engineering Mechanics*, ASCE, Vol. 117, No. 8, pp. 1865-1877.

17. Deodatis, G., Fujimoto, Y., Ito, S., Spencer, J. and Itagaki, H. (1992). "Non-Periodic Inspection by Bayesian Method I," *Probabilistic Engineering Mechanics*, Vol. 7, No. 4, pp. 191-204.

18. Ito, S., Deodatis, G., Fujimoto, Y., Asada, H. and Shinozuka, M. (1992). "Non-Periodic Inspection by Bayesian Method II: Structures with Elements Subjected to Different Stress Levels," *Probabilistic Engineering Mechanics*, Vol. 7, No. 4, pp. 205-215.

19. Theoharis, A.P. and Deodatis, G. (1994). "Seismic Ground Motion in a Layered Half-Space Due to a Haskell-Type Source. I: Theory," *Soil Dynamics and Earthquake Engineering*, Vol. 13, No. 4, pp. 281-292.

20. Deodatis, G. and Theoharis, A.P. (1994). "Seismic Ground Motion in a Layered Half-Space Due to a Haskell-Type Source. II: Applications," *Soil Dynamics and Earthquake Engineering*, Vol. 13, No. 4, pp. 293-301.

21. Wall, F.J. and Deodatis, G. (1994). "Variability Response Functions of Stochastic Plane Stress/Strain Problems," *Journal of Engineering Mechanics*, ASCE, Vol. 120, No. 9, pp. 1963-1982.

22. Matteo, J., Deodatis, G. and Billington, D.P. (1994). "Safety Analysis of Suspension-Bridge Cables: Williamsburg Bridge," *Journal of Structural Engineering*, ASCE, Vol. 120, No. 11, pp. 3197-3211.

23. Shinozuka, M. and Deodatis, G. (1996). "Simulation of Multi-Dimensional Gaussian Stochastic Fields by Spectral Representation," *Applied Mechanics Reviews*, ASME, Vol. 49, No. 1, pp. 29-53.

24. Deodatis, G., Asada, H. and Ito, S. (1996). "Reliability of Aircraft Structures Under Non-Periodic Inspection: A Bayesian Approach," *Journal of Engineering Fracture Mechanics*, Vol. 53, No. 5, pp. 789-805.

25. Zhang, R. and Deodatis, G. (1996). "Seismic Ground Motion Synthetics of the 1989 Loma Prieta Earthquake," *Earthquake Engineering and Structural Dynamics*, Vol. 25, No. 5, pp. 465-481.

26. Deodatis, G. (1996). "Non-Stationary Stochastic Vector Processes: Seismic Ground Motion Applications," *Probabilistic Engineering Mechanics*, Vol. 11, No. 3, pp. 149-167.

27. Deodatis, G. (1996). "Simulation of Ergodic Multi-Variate Stochastic Processes," *Journal of Engineering Mechanics*, ASCE, Vol. 122, No. 8, pp. 778-787.

28. Popescu, R., Prevost, J.H. and Deodatis, G. (1997). "Effects of Spatial Variability on Soil Liquefaction: Some Design Recommendations," *Geotechnique*, Vol. XLVII, No. 5, pp. 1019-1036.

29. Deodatis, G. (contributor to three sections of the report) (1997). "A State-of-the-Art Report on Computational Stochastic Mechanics," *Probabilistic Engineering Mechanics* (Editor: G.I. Schueller), Vol. 12, No. 4, pp. 197-321.

30. Popescu, R., Deodatis, G. and Prevost, J.H. (1998). "Simulation of Homogeneous NonGaussian Stochastic Vector Fields," *Probabilistic Engineering Mechanics*, Vol. 13, No. 1, pp. 1-13.

31. Graham, L. and Deodatis, G. (1998). "Variability Response Functions for Stochastic Plate Bending Problems," *Structural Safety*, Vol. 20, No. 2, pp. 167-188.

32. Shinozuka, M., Deodatis, G., Zhang, R. and Papageorgiou, A.S. (1999). "Modeling, Synthetics and Engineering Applications of Strong Earthquake Wave Motion," *Soil Dynamics and Earthquake Engineering*, Vol. 18, No. 3, pp. 209-228.

33. Graham, L. and Deodatis, G. (2001). "Response and Eigenvalue Analysis of Stochastic Finite Element Systems with Multiple Correlated Material and Geometric Properties," *Probabilistic Engineering Mechanics,* Vol. 16, No. 1, pp. 11-29.

34. Deodatis, G. and Micaletti, R.C. (2001). "Simulation of Highly Skewed Non-Gaussian Stochastic Processes," *Journal of Engineering Mechanics*, ASCE, Vol. 127, No. 12, pp. 1284-1295.

35. Koutsourelakis, S., Prevost, J-H. and Deodatis, G. (2002). "Risk Assessment of an Interacting Structure-Soil System Due to Liquefaction," *Earthquake Engineering and Structural Dynamics*, Vol. 31, No. 4, pp. 851-879.

36. Moropoulou, A., Polikreti, K., Ruf, V. and Deodatis, G. (2003). "San Francisco Monastery, Quito, Equador: Characterisation of Building Materials, Damage Assessment and Conservation Considerations," *Journal of Cultural Heritage,* Vol. 4, No. 2, pp. 101-108.

37. Deodatis, G., Graham-Brady, L. and Micaletti, R. (2003). "A Hierarchy of Upper Bounds on the Response of Stochastic Systems With Large Variation of their Properties: Random Variable Case," *Probabilistic Engineering Mechanics*, Vol. 18, No. 4, pp. 349-364.

38. Deodatis, G., Graham-Brady, L. and Micaletti, R. (2003). "A Hierarchy of Upper Bounds on the Response of Stochastic Systems With Large Variation of their Properties: Random Field Case," *Probabilistic Engineering Mechanics*, Vol. 18, No. 4, pp. 365-375.

39. Smyth, A.W., Altay, G., Deodatis, G., Erdik, M., Franco, G., Gülkan, P., Kunreuther, H., Luş, H., Mete, E., Seeber, L. and Yüzügüllü, O. (2004). "Probabilistic Benefit-Cost Analysis for Earthquake Damage Mitigation: Evaluating Measures for Apartment Houses in Turkey," *Earthquake Spectra,* Vol. 20, No. 1, pp 171-203.

40. Koutsourelakis, S. and Deodatis, G. (2005). "Simulation of Binary Random Fields With Applications to Two-Phase Random Media," *Journal of Engineering Mechanics*, ASCE, Vol. 131, No. 4, pp. 397-412.

41. Papadopoulos, V., Deodatis, G. and Papadrakakis, M. (2005). "Flexibility-Based Upper Bounds on the Response Variability of Simple Beams," *Computer Methods in Applied Mechanics and Engineering*, Vol. 194, Nos. 12-16, pp. 1385-1404.

42. Popescu, R., Prevost, J.H. and Deodatis, G. (2005). "3D Effects in Seismic Liquefaction of Stochastically Variable Soil Deposits," *Geotechnique*, Vol. 55, No. 1, pp. 21-31.

43. Popescu, R., Deodatis, G. and Nobahar, A. (2005). "Effects of Random Heterogeneity of Soil Properties on Bearing Capacity," *Probabilistic Engineering Mechanics*, Vol. 20, No. 4, pp. 324-341.

44. Papadopoulos, V. and Deodatis, G. (2006). "Response Variability of Stochastic Frame Structures Using Evolutionary Field Theory," *Computer Methods in Applied Mechanics and Engineering*, Vol. 195, Nos. 9-12, pp. 1050-1074.

45. Koutsourelakis, S. and Deodatis, G. (2006). "Simulation of Multidimensional Binary Random Fields with Application to Modeling of Two-Phase Random Media," *Journal of Engineering Mechanics*, ASCE, Vol. 132, No. 6, pp. 619-631.

46. Popescu, R., Prevost, J.H., Deodatis, G. and Chakrabortty, P. (2006). "Dynamics of Nonlinear Porous Media with Applications to Soil Liquefaction," *Soil Dynamics and Earthquake Engineering*, Vol. 26, Nos. 6-7, pp. 648-665.

47. Papadopoulos, V., Papadrakakis, M. and Deodatis, G. (2006). "Analysis of Mean and Mean Square Response of General Linear Stochastic Finite Element Systems," *Computer Methods in Applied Mechanics and Engineering*, Vol. 195, Nos. 41-43, pp. 5454-5471.

48. Shi, Y., Deodatis, G. and Betti, R. (2007). "Random Field-Based Approach for Strength Evaluation of Suspension Bridge Cables," *Journal of Structural Engineering,* ASCE, Vol. 133, No. 12, pp. 1690-1699.

49. Bocchini, P. and Deodatis, G. (2008). "Critical Review and Latest Developments of a Class of Simulation Algorithms for Strongly Non-Gaussian Random Fields," *Probabilistic Engineering Mechanics*, Vol. 23, No. 4, pp. 393-407.

50. Tantala, M., Nordenson, G., Deodatis, G. and Jacob, K. (2008). "Earthquake Loss Estimation for the New York City Metropolitan Region," *Soil Dynamics and Earthquake Engineering*, Vol. 28, Nos. 10-11, pp. 812-835.

51. Franco, G., Green, R., Khazai, B., Smyth, A. and Deodatis, G. (2010). "Field Damage Survey of New Orleans Homes in the Aftermath of Hurricane Katrina," *Natural Hazards Review*, ASCE, Vol. 11, No. 1, pp. 7-18.

52. Cacciola, P. and Deodatis, G. (2011). "A Method for Generating Fully Non-Stationary and Spectrum-Compatible Ground Motion Vector Processes," *Soil Dynamics and Earthquake Engineering*, Vol. 31, No. 3, pp. 351-360.

53. Arwade, S. and Deodatis, G. (2011). "Variability Response Functions for Effective Material Properties," *Probabilistic Engineering Mechanics*, Vol. 26, No. 2, pp. 174-181.

54. Shields, M.D., Deodatis, G. and Bocchini, P. (2011). "A Simple and Efficient Methodology to Approximate a General Non-Gaussian Stationary Stochastic Process by a Translation Process," *Probabilistic Engineering Mechanics*, Vol. 26, No. 4, pp. 511-519.

55. Hiriyur, B., Waisman, H. and Deodatis, G. (2011). "Uncertainty Quantification in Homogenization of Heterogeneous Microstructures Modeled by XFEM" *International Journal for Numerical Methods in Engineering*, Vol. 88, No.3, pp. 257-278.

56. Bocchini, P., Frangopol, D. and Deodatis, G. (2011). "A Random Field Based Technique for the Efficiency Enhancement of Bridge Network Life-Cycle Analysis Under Uncertainty," *Engineering Structures*, Vol. 33, No. 12, pp. 3208-3217.

57. Xu, X.F., Hu, K., Beyerlein, I.J. and Deodatis, G. (2011). "Statistical Strength of Hierarchical Carbon Nanotube Composites," *International Journal for Uncertainty Quantification*, Vol. 1, No. 4, pp. 279-295.

58. Jacob, K., Deodatis, G., Atlas, J., Whitcomb, M., Lopeman, M., Markogiannaki, O., Kennett, Z., Morla, A., Leichenko, R. and Vancura, P. (2011). "Responding to Climate Change in New York State: The ClimAID Integrated Assessment for Effective Climate Change Adaptation in New York State: Transportation," *Annals of the New York Academy of Sciences*, Vol. 1244, No. 1, pp. 299-362.

59. Jacob, K., Maxemchuk, N., Deodatis, G., Morla, A., Schlossberg, E., Paung, I., Lopeman, M., Horton, R., Bader, D., Leichenko, R., Vancura, P. and Klein, Y. (2011). "Responding to Climate Change in New York State: The ClimAID Integrated Assessment for Effective Climate Change Adaptation in New York State: Telecommunications," *Annals of the New York Academy of Sciences*, Vol. 1244, No. 1, pp. 363-396.

60. Teferra, K. and Deodatis, G. (2012). "Variability Response Functions for Beams with Nonlinear Constitutive Laws," *Probabilistic Engineering Mechanics*, Vol. 29, pp. 139-148.

61. Miranda, M. and Deodatis, G. (2012). "Generalized Variability Response Functions for Beam Structures with Stochastic Parameters," *Journal of Engineering Mechanics,* ASCE, Vol. 138, No. 9, pp. 1165-1185.

62. Teferra, K., Arwade, S.R. and Deodatis, G. (2012). "Stochastic Variability of Effective Properties via the Generalized Variability Response Function," *Computers and Structures,* Vol. 110-111, pp. 107-115.

63. Shields, M. and Deodatis, G. (2013). "A Simple and Efficient Methodology to Approximate a General Non-Gaussian Stationary Stochastic Vector Process by a Translation Process with Applications in Wind Velocity Simulation," *Probabilistic Engineering Mechanics*, Vol. 31, pp. 19-29.

64. Chatzis, M.N. and Deodatis, G. (2013). "Modeling of Very Large Interacting Multiple-Beam Systems with Application to Suspension Bridge Cables," *Journal of Structural Engineering,* ASCE, Vol. 139, No. 9, pp. 1541-1554.

65. Shields, M.D. and Deodatis, G. (2013). "Estimation of Evolutionary Spectra for Simulation of Non-Stationary and Non-Gaussian Stochastic Processes," *Computers and Structures*, Vol. 126, pp. 149-163.

66. Podrouzek, J., Bucher, C. and Deodatis, G. (2014). "Identification of Critical Samples of Stochastic Processes Towards Feasible Structural Reliability Applications," *Structural Safety*, Vol. 47, pp. 39-47.

67. Teferra, K., Arwade, S.R. and Deodatis, G. (2014). "Generalized Variability Response Functions for Two-Dimensional Elasticity Problems," *Computer Methods in Applied Mechanics and Engineering*, Vol. 272, pp. 121-137.

68. Hancilar, U., Cakti, E., Erdik, M., Franco, G.E. and Deodatis, G. (2014). "Earthquake Vulnerability of School Buildings: Probabilistic Structural Fragility Analyses," *Soil Dynamics and Earthquake Engineering*, Vol. 67, pp. 169-178.

69. Savvas, D., Stefanou, G., Papadrakakis, M. and Deodatis, G. (2014). "Homogenization of Random Heterogeneous Media with Inclusions of Arbitrary Shape Modeled by XFEM," *Computational Mechanics*, Vol. 54, pp. 1221-1235.

70. Montoya, A., Deodatis, G., Betti, R. and Waisman, H. (2015). "Physics-Based Stochastic Model to Determine the Failure Load of Suspension Bridge Main Cables," *Journal of Computing in Civil Engineering*, ASCE, Vol. 29, No. 4.

71. Gerasimidis, S., Deodatis, G., Kontoroupi, T. and Ettouney, M. (2015). "Loss-of-Stability-Induced Progressive Collapse Modes in 3D Steel Moment Frames," *Journal of Structure and Infrastructure Engineering,* Vol. 11, No. 3, pp. 334-344.

72. Benowitz, B., Shields, M.D. and Deodatis, G. (2015). "Determining Evolutionary Spectra from Non-Stationary Autocorrelation Functions," *Probabilistic Engineering Mechanics*, Vol. 41, pp. 73-88.

73. Benowitz, B. and Deodatis, G. (2015). "Simulation of Wind Velocities on Long Span Structures: A Novel Stochastic Wave Based Model," *Wind Engineering & Industrial Aerodynamics*, Vol. 147, pp. 154-163.

74. Lopeman, M., Deodatis, G., and Franco, G. (2015). "Extreme Storm Surge Hazard Estimation in Lower Manhattan: Clustered Separated Peaks-Over-Threshold Simulation (CSPS) Method," *Natural Hazards*, Vol. 78, pp. 355-391.

75. Vlachos, C., Papakonstantinou, K. and Deodatis, G. (2015). "A Multi-Modal Analytical Non-Stationary Spectral Model for Characterization and Stochastic Simulation of Earthquake Ground Motions," *Soil Dynamics and Earthquake Engineering* (accepted for publication on October 5, 2015).

76. Arwade, S.R., Deodatis, G. and Teferra, K. (2015) "Variability response functions for apparent material properties" *Probabilistic Engineering Mechanics* (accepted for publication on October 19, 2015).

77. Tabbakhha, M. and Deodatis, G. (2015). "Effect of Uncertainty of Tensile Strength of Mortar Joints on the Behavior of Masonry Walls under Lateral Loads," *ASCE Journal of Structural Engineering* (under review - submitted September 2, 2015).

78. Wu, J., McAuliffe, C., Waisman, H. and Deodatis, G. (2015). "Stochastic Analysis of Polymer Composites Failure in Large Deformations Modeled by a Phase Field Model," *Computer Methods in Applied Mechanics and Engineering*, (under review - submitted November 2, 2015).

Conference Publications

1. Naganuma, T., Deodatis, G., Shinozuka, M. and Samaras, E. (1985). "Digital Generation of Multidimensional Random Fields," Structural Safety and Reliability, Proceedings of the 4th International Conference on Structural Safety and Reliability (Editors: I. Konishi, A. H-S. Ang, M. Shinozuka), Kobe, Japan, May 27-29, an IASSAR Publication, pp. I.251-I.260.

2. Deodatis, G., Shinozuka, M. and Samaras, E. (1985). "An AR Model for Non-Stationary Processes," Proceedings of the 2nd International Conference on Soil Dynamics and Earthquake Engineering (Editors: C. A. Brebbia, A. S. Cakmak, A. M. Abdel Ghaffar), on board the liner the Queen Elizabeth 2, New York to Southampton, June/July, a Computational Mechanics Publication, Springer-Verlag, pp. 2.57-2.66.

3. Shinozuka, M., Deodatis, G. and Harada, T. (1987). "Digital Simulation of Seismic Ground Motion," Proceedings of the US-Japan Joint Seminar on Stochastic Approaches in Earthquake Engineering (Editors: Y. K. Lin, R. Minai), Boca Raton, Florida, May 6-7, Lecture Notes in Engineering, Vol. 32, Springer-Verlag, pp. 252-298.

4. Shinozuka, M., Deodatis, G. and Wu, W-F. (1987). "Nonlinear Dynamic Response and System Stochasticity," Proceedings of the IUTAM Symposium on Nonlinear Stochastic Dynamic Engineering Systems (Editors: F. Ziegler, G. I. Schueller), Innsbruck/Igls, Austria, June 21-26, Springer-Verlag, pp. 255-268.

5. Deodatis, G. and Shinozuka, M. (1988). "Stochastic FEM Analysis of Nonlinear Dynamic Problems," Proceedings of the 5th ASCE Specialty Conference on Probabilistic Methods in Civil Engineering (Editor: P. D. Spanos), Blacksburg, Virginia, May 25-27, an ASCE Publication, pp. 152-155.

6. Deodatis, G. and Shinozuka, M. (1988). "Digital Simulation of Seismic Ground Motion Using Stochastic Wave Theory," Proceedings of the 9th World Conference on Earthquake Engineering, Tokyo-Kyoto, Japan, August 2-9, pp. II.801-II.806.

7. Shinozuka, M. and Deodatis, G. (1989). "Stochastic Wave Models for Seismic Ground Motion," Structural Safety and Reliability, Proceedings of ICOSSAR '89, the 5th International Conference on Structural Safety and Reliability (Editors: A. H-S. Ang, M. Shinozuka and G. I. Schueller), San Francisco, California, August 7-11, an ASCE Publication, Vol. I, pp. 335-342.

8. Deodatis, G. and Shinozuka, M. (1989). "Spectral Distribution Free Bounds on the Response Variability of Stochastic Systems," Structural Safety and Reliability, Proceedings of ICOSSAR '89, the 5th International Conference on Structural Safety and Reliability (Editors: A. H-S. Ang, M. Shinozuka and G. I. Schueller), San Francisco, California, August 7-11, an ASCE Publication, Vol. II, pp. 1057-1064.

9. Deodatis, G., Shinozuka, M. and Papageorgiou, A. (1990). “Frequency-Wave Number Spectra from Seismic Sources in a Half-Space,” Proceedings of the 4th U.S. National Conference on Earthquake Engineering, Palm Springs, California, May 20-24, a EERI Publication, Vol. I, pp. 447-456.

10. Deodatis, G. and Shinozuka, M. (1991). “The Weighted Integral Method for Calculating the Stochastic Stiffness Matrix of Stochastic Systems,” Proceedings of the 1991 ASCE Engineering Mechanics Specialty Conference on Mechanics Computing in 1990's and Beyond (Editors: H. Adeli and R.L. Sierakowski), Columbus, Ohio, May 20-22, an ASCE Publication, pp. 183-187.

11. Deodatis, G. and Shinozuka, M. (1991). “Response Variability and Reliability of Stochastic Systems Using the Weighted Integral Method,” Proceedings of the 1991 ASCE Engineering Mechanics Specialty Conference on Mechanics Computing in 1990's and Beyond (Editors: H. Adeli and R.L. Sierakowski), Columbus, Ohio, May 20-22, an ASCE Publication, pp. 263-267.

12. Deodatis, G., Wall, W. and Shinozuka, M. (1991). “Analysis of Two-Dimensional Stochastic Systems by the Weighted Integral Method,” Proceedings of the 1st International Conference on Computational Stochastic Mechanics, (Editors: P.D. Spanos and C.A. Brebbia), Corfu, Greece, September 17-19, an Elsevier Applied Science Publication, pp. 395-406.

13. Billington, D. P. and Deodatis, G. (1991). “Form and Aesthetics in Cable-Stayed Bridges,” Proceedings of the Seminar on Cable-Stayed Bridges: Recent Developments and their Future, (Editors: M. Ito et al.), Yokohama, Japan, December 10-11, an Elsevier Publication, pp. 35-55.

14. Deodatis, G. and Shinozuka, M. (1992). “Response Variability of Reinforced Concrete Frames with Stochastic Material Properties,” Honorary Volume for Professor T. P. Tassios, National Technical University of Athens, Department of Civil Engineering, pp. 27-48.

15. Deodatis, G., Theoharis, A. and Shinozuka, M. (1992). “F-K Spectra from a Haskell-Type Source in a Multiple-Layered Half-Space,” Proceedings of the 6th ASCE Specialty Conference on Probabilistic Mechanics and Structural and Geotechnical Reliability, (Editor: Y.K. Lin), Denver, Colorado, July 8-10, an ASCE Publication, pp. 272-275.

16. Wall, F. and Deodatis, G. (1992). “Response Variability and Reliability of Plates Using the Weighted Integral Method,” Proceedings of the 6th ASCE Specialty Conference on Probabilistic Mechanics and Structural and Geotechnical Reliability, (Editor: Y.K. Lin), Denver, Colorado, July 8-10, an ASCE Publication, pp. 41-44.

17. Deodatis, G. and Theoharis, A. (1992). “Simulation of Seismic Ground Motion in the New Madrid Area Using Analytically Derived Frequency-Wave Number Fourier Amplitudes,”

Proceedings of the 10th World Conference on Earthquake Engineering, Madrid, Spain, July 19-24, Balkema, pp. 885-890.

18. Theoharis, A., Deodatis, G. and Papageorgiou, A. (1992). "Frequency-Wave Number Fourier Amplitudes of Seismic Ground Motion in a Multiple-Layered Half-Space Due to a Haskell-Type Source," Proceedings of the 10th World Conference on Earthquake Engineering, Madrid, Spain, July 19-24, Balkema, pp. 1121-1126.

19. Wall, F., Deodatis, G. and Shinozuka, M. (1993). "Variability Response Functions and Upper Bounds of Response Variability of 2D Stochastic Systems," Structural Safety and Reliability, Proceedings of ICOSSAR '93, the 6th International Conference on Structural Safety and Reliability (Editors: G.I. Schueller, M. Shinozuka and J.T.P. Yao), Innsbruck, Austria, August 9-13, Balkema, pp. 381-388.

20. Wall, F., Deodatis, G. and Bucher, C.G. (1993). "Reliability Estimates of Plates With Uncertain Material Properties," Structural Safety and Reliability, Proceedings of ICOSSAR '93, the 6th International Conference on Structural Safety and Reliability (Editors: G.I. Schueller, M. Shinozuka and J.T.P. Yao), Innsbruck, Austria, August 9-13, Balkema, pp. 411-414.

21. Deodatis, G. (1993). "Non-Periodic Inspection of Fatigue-Sensitive Structures by Bayesian Approach," Structural Safety and Reliability, Proceedings of ICOSSAR '93, the 6th International Conference on Structural Safety and Reliability (Editors: G.I. Schueller, M. Shinozuka and J.T.P. Yao), Innsbruck, Austria, August 9-13, Balkema, pp. 997-1004.

22. Shinozuka, M., Zhang, R. and Deodatis, G. (1993). "Sine-Square Modification to Kanai-Tajimi Earthquake Ground Motion Spectrum," Structural Safety and Reliability, Proceedings of ICOSSAR '93, the 6th International Conference on Structural Safety and Reliability (Editors: G.I. Schueller, M. Shinozuka and J.T.P. Yao), Innsbruck, Austria, August 9-13, Balkema, pp. 2217-2223.

23. Deodatis, G., Zhang, R. and Shinozuka, M. (1994). "Simulation of the 1989 Loma Prieta Earthquake," Proceedings of the Fifth U.S. National Conference on Earthquake Engineering, Chicago, Illinois, July 10-14, a EERI Publication, Vol. III, pp. 271-280.

24. Deodatis, G. (1994). "Simulation of Multi-Variate Stochastic Processes," Proceedings of the 2nd International Conference on Computational Stochastic Mechanics (Editor: P.D. Spanos), Athens, Greece, June 12-15, Balkema, pp. 297-305.

25. Billington, D. P. and Deodatis, G. (1995). "Performance of the Menai Straits Bridge Before and After Reconstruction," Proceedings of the ASCE Structures Congress XIII, Boston, MA, April 2-5.

26. Deodatis, G. (1995). "Simulation of Non-Stationary Stochastic Vector Processes," Proceedings of the 10th ASCE Engineering Mechanics Specialty Conference (Editor: S. Sture), Boulder, Colorado, May 21-24, pp. 806-809.

27. Deodatis, G., Popescu, R. and Prevost, J-H. (1995). "Simulation of Stochastic Processes and Fields for Monte Carlo Simulation Applications: Some Recent Developments," Proceedings of the 1995 ASME Design Engineering Technical Conferences (DE-Vol. 84-1), Boston, MA, September 17-20, Vol.3--Part A, pp. 955-965.

28. Deodatis, G. and Graham, L. (1996). "Variability Response Functions for Random Eigenvalue Problems," Proceedings of the 11th ASCE Engineering Mechanics Specialty Conference (Editor: Y.K. Lin and T.C. Su), Ft. Lauderdale, Florida, May 19-22, pp. 681-684.

29. Deodatis, G., Durukal, E., Papageorgiou, A.S. and Shinozuka, M. (1996). "Synthesis of Ground Motions of a Loma Prieta-Type Earthquake in the Vicinity of the San Francisco Metropolitan Area," Proceedings of the 11th World Conference on Earthquake Engineering, Acapulco, Mexico, June 23-28 (on CD-ROM).

30. Popescu, R., Prevost, J.H. and Deodatis, G. (1996). "Effects of Stochastic Variability of Soil Properties on Liquefaction Resistance," Proceedings of the 11th World Conference on Earthquake Engineering, Acapulco, Mexico, June 23-28 (on CD-ROM).

31. Deodatis, G. and Graham, L. (1996). "Analysis of Eigenvalue Variability for 2D Stochastic Structural Systems Using Variability Response Functions," Proceedings of the 7th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability (Editors: D.M. Frangopol and M.D. Grigoriu), Worcester, Massachusetts, August 7-9, pp. 600-603.

32. Graham, L. and Deodatis, G. (1996). "Variability Response Functions for Plane Elasticity Problems with Multiple Stochastic Material/Geometric Properties," Proceedings of the 7th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability (Editors: D.M. Frangopol and M.D. Grigoriu), Worcester, Massachusetts, August 7-9, pp. 174-177.

33. Deodatis, G. (1996). "Generation of Ground Motion Time Histories as Non-Stationary Vector Processes: Response Spectrum Compatible Seismograms," Proceedings of the 7th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability (Editors: D.M. Frangopol and M.D. Grigoriu), Worcester, Massachusetts, August 7-9, pp. 616-619.

34. Popescu, R., Deodatis, G. and Prevost, J.H. (1996). "Simulation of Multi-Dimensional, Multi-Variate, Non-Gaussian, Homogeneous Stochastic Fields with Applications to Soil Liquefaction," Proceedings of the 7th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability (Editors: D.M. Frangopol and M.D. Grigoriu), Worcester, Massachusetts, August 7-9, pp. 808-811.

35. Popescu, R., Prevost, J.H. and Deodatis, G. (1996). "Stochastic Input Finite Element Simulation of the Behavior of an Artificial Island," Proceedings of the 1996 Canadian Society of Civil Engineers Annual Conference, Edmonton, Alberta, pp. 38-49.

36. Popescu, R., Prevost, J.H. and Deodatis, G. (1996). "Influence of Spatial Variability of Soil Properties on Seismically Induced Liquefaction," Proceedings of the ASCE Geotechnical Engineering Division Specialty Conference on Uncertainty in the Geologic Environment: From Theory to Practice, Madison, Wisconsin, Vol. 2, pp. 1098-1112.

37. Prevost, J.H., Deodatis, G., Popescu, R., Nojiri, Y. and Ohbo, N. (1997). "Integrated Procedure for Dynamic Analysis of Fault--Soil--Structure Systems," Proceedings of the 14th International Conference on Soil Mechanics and Foundation Engineering, Hamburg, Germany, Vol. 2, pp. 1009-1012.

38. Kareem, A., Deodatis, G. and Shinozuka, M. (1997). "Modeling of Coherence for Stochastic Representation of Wind, Wave and Seismic Load Effects," Proceedings of the 7th International Conference on Structural Safety and Reliability (Editors: N. Shiraishi, M. Shinozuka, and Y.K. Wen), Kyoto, Japan, November 24-28, Balkema, pp. 747-754.

39. Deodatis, G. and Graham, L. (1997). "Variability Response Functions for Structures with Multiple Uncertain Material and/or Geometric Properties," Proceedings of the 7th International Conference on Structural Safety and Reliability (Editors: N. Shiraishi, M. Shinozuka, and Y.K. Wen), Kyoto, Japan, November 24-28, Balkema, pp. 883-890.

40. Prevost, J.H., Popescu, R. and Deodatis, G. (1997). "Influence of Frequency Content of Ground Motion on Seismically Induced Soil Liquefaction," Proceedings of the 7th International Conference on Structural Safety and Reliability (Editors: N. Shiraishi, M. Shinozuka, and Y.K. Wen), Kyoto, Japan, November 24-28, Balkema, pp. 1823-1826.

41. Micaletti, R.C. and Deodatis, G. (1998). "Bounds on Response Variability of Stochastic Systems with Large Variation of Structural Properties," Proceedings of the 12th ASCE Engineering Mechanics Specialty Conference, LaJolla, CA, May 17-20 (on CD-ROM).

42. Popescu, R., Deodatis, G. and Prevost, J.H. (1998). "Simulation of Non-Gaussian Stochastic Fields with Applications to Soil Liquefaction: Two Case Studies," Proceedings of the 12th ASCE Engineering Mechanics Specialty Conference, LaJolla, CA, May 17-20 (on CD-ROM).

43. Micaletti, R.C. and Deodatis, G. (1998). "Large Variation of Stochastic System Properties: Upper Bounds on Non-Gaussian Response," Proceedings of the 3rd International Conference on Computational Stochastic Mechanics (Editor: P.D. Spanos), Santorini, Greece, June 14-17, Balkema, pp. 107-117.

44. Micaletti, R.C. and Deodatis, G. (1999). "Effect of Marginal Probability Distribution of Material Properties on Stochastic Structural Response," Proceedings of the 13th ASCE

Engineering Mechanics Specialty Conference, the Johns Hopkins University, Baltimore, MD, June 13-16 (on CD-ROM).

45. Saxena, V., Deodatis, G. and Shinozuka, M. (2000). "Effect of Spatial Variation of Earthquake Ground Motion on the Nonlinear Dynamic Response of Highway Bridges," Proceedings of the 12th World Conference on Earthquake Engineering, Auckland, New Zealand, January 30-February 4 (on CD-ROM).

46. Nordenson, G., Deodatis, G., Jacob, K. and Tantala, M. (2000). "Earthquake Loss Estimation for the New York City Area," Proceedings of the 12th World Conference on Earthquake Engineering, Auckland, New Zealand, January 30-February 4 (on CD-ROM).

47. Saxena, V., Deodatis, G., Shinozuka, M. and Feng, M.Q. (2000). "Development of Fragility Curves for Multi-Span Reinforced Concrete Bridges," Proceedings of the International Conference on Monte Carlo Simulation, Principality of Monaco, Balkema Publishers, pp. 499-504.

48. Deodatis, G., Saxena, V. and Shinozuka, M. (2000). "Effect of Spatial Variability of Ground Motion on Bridge Fragility Curves," Proceedings of the 8th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability, University of Notre Dame, on CD-ROM.

49. Koutsourelakis, S. and Deodatis, G. (2000). "Simulation of Non-Gaussian Stochastic Processes: Ensemble Characterization of Generated Sample Functions," *Recent Advances in Applied Mechanics*, Honorary Volume for Professor A.N. Kounadis, National Technical University of Athens, pp. 49-62.

50. Koutsourelakis, S., Prevost, J-H. and Deodatis, G. (2001). "Stochastic Approach to the Design of a Simple Structure under the Risk of Liquefaction," Proceedings of the 8th International Conference on Structural Safety and Reliability, Newport Beach, California, June 17-21 (on CD-ROM).

51. Deodatis, G., Koutsourelakis, S. and Micaletti, R. (2001). "A Methodology to Simulate Strongly Non-Gaussian Stochastic Processes and Fields," Proceedings of the 8th International Conference on Structural Safety and Reliability, Newport Beach, California, June 17-21 (on CD-ROM).

52. Tantalla, J., Prevost, J-H. and Deodatis, G. (2001). "Spatial Variability of Soil Properties in Slope Stability Analysis: Fragility Curve Generation," Proceedings of the 8th International Conference on Structural Safety and Reliability, Newport Beach, California, June 17-21 (on CD-ROM).

53. Tantala, M. and Deodatis, G. (2002). "Development of Seismic Fragility Curves for Tall Buildings," 15th ASCE Engineering Mechanics Conference, Columbia University, New York, June 2-5 (on CD-ROM).

54. Koutsourelakis, S. and Deodatis, G. (2002). "A Methodology to Simulate the Clustering of Inclusions in Two-Phase Random Media," 4th International Conference on Computational Stochastic Mechanics, Corfu, Greece, June 9-12, pp. 325-333.

55. Deodatis, G. and Koutsourelakis, S. (2002). "A Methodology to Generate Sample Realizations of Two-Phase Random Media," Proceedings of the Fifth World Congress on Computational Mechanics (Editors: H.A. Mang, F.G. Rammerstorfer, J. Eberhardsteiner), July 7-12, Vienna, Austria, ISBN 3-9501554-0-6, http://wccm.tuwien.ac.at

56. Tantala, M.W., Dargush, A., Deodatis, G., Jacob, K., Nordenson, G.J.P., O'Brien, D. and Swiren, B. (2002). "Earthquake Loss Estimation for the New York City Area," 7th National Conference on Earthquake Engineering, Boston, MA, July 21-25 (on CD-ROM).

57. Smyth, A.W., Deodatis, G., Franco,G., Kunreuther, H. and Lus, H. (2003). "Benefit-Cost Analysis for Mitigating Seismic Losses: Probabilistic Evaluation of Retrofit Measures for Residential Buildings in Turkey," Applications of Statistics and Probability in Civil Engineering, Proceedings of 9th ICASP (Editors: A. Der Kiureghian, S. Madanat and J.M. Pestana), July 6-9, San Francisco, California, pp. 735-742.

58. Popescu, R., Deodatis, G. and Nobahar, A. (2003). "Fragility Curves for Bearing Capacity of Heterogeneous Soils," Applications of Statistics and Probability in Civil Engineering, Proceedings of 9th ICASP (Editors: A. Der Kiureghian, S. Madanat and J.M. Pestana), July 6-9, San Francisco, California, pp. 1357-1364.

59. Koutsourelakis, P.S. and Deodatis, G. (2003). "Simulation of Binary Random Fields: Application to Random Media," Applications of Statistics and Probability in Civil Engineering, Proceedings of 9th ICASP (Editors: A. Der Kiureghian, S. Madanat and J.M. Pestana), July 6-9, San Francisco, California, pp. 337-343.

60. Deodatis, G., Graham-Brady, L. and Micaletti, R. (2003). "Upper Bounds on the Response Variance of Stochastic Systems via Generalized Variability Response Functions," Second M.I.T. Conference on Computational Fluid and Solid Mechanics (Editor: K.J. Bathe), June 17 - 20, Cambridge, MA, Elsevier, pp. 1918-1921.

61. Kunreuther, H., Deodatis, G. and Smyth, A. (2004). " Integrating Mitigation with Risk-Transfer Instruments," Catastrophe Risk and Reinsurance: A Country Risk Management Perspective (Editor: E.N. Gurenko), Risk Books, pp. 117-134.

62. Smyth, A.W., Deodatis, G., Franco, G., He, Y. and Gurvich, T. (2004). "Evaluating Earthquake Retrofitting Measures for Schools: A Demonstration Cost-Benefit Analysis," Ad Hoc Experts Group Meeting on Earthquake Safety in Schools, Organization of Economic Cooperation and Development, Paris, February 9-11, GeoHazards International, pp. 107-113.

63. Shi, Y., Deodatis, G. and Koutsourelakis, S. (2004). "A Novel Approach for Simulation of Non-Gaussian Fields: Application in Estimating Wire Strengths from Experimental Data," Proceedings of the 9th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, Sandia National Laboratories, Albuquerque, New Mexico, July 26-28, on CD-ROM.

64. Papadopoulos, V., Deodatis, G. and Papadrakakis, M. (2004). "Bounds on Response Variability of Simple Beams Using a Flexibility-Based Formulation," Proceedings of the 9th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, Sandia National Laboratories, Albuquerque, New Mexico, July 26-28, on CD-ROM.

65. Deodatis, G., Kunreuther, H., Pressman, E. and Smyth, A. (2004). "Estimation of Seismic Loss Distributions and Loss Exceedance Curves Using Fragility Curves and Monte Carlo Simulation," Proceedings of the 9th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, Sandia National Laboratories, Albuquerque, New Mexico, July 26-28, on CD-ROM.

66. Chen, Y. and Deodatis, G. (2004). "Simulation of Highly-Skewed Non-Gaussian Vector Processes," Proceedings of the 9th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, Sandia National Laboratories, Albuquerque, New Mexico, July 26-28, on CD-ROM.

67. Popescu, R., Prevost, J.H. and Deodatis, G. (2004). "Seismic Liquefaction of 3D Randomly Variable Soils," Proceedings of the 9th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, Sandia National Laboratories, Albuquerque, New Mexico, July 26-28, on CD-ROM.

68. Tomasetti, R.L., Panariello, G.F. and Deodatis, G. (2005). "Reality Graduate Course – Design of Large Scale Building Structures," Proceedings of the 2005 Structures Congress: Metropolis and Beyond, ASCE, New York City, April 20-24, on CD-ROM.

69. Shi, Y., Deodatis, G. and Betti, R. (2005). "Recent Developments in Simulation of Non-Gaussian Processes/Fields with Application in Suspension Cable Strength Estimation," Proceedings of the 9th International Conference on Structural Safety and Reliability, Rome, Italy, June 19-23.

70. Papadopoulos, V. and Deodatis, G. (2005). "Closed-Form Expressions of the Variability Response Function for Stochastic Frame Structures," Proceedings of the 9th International Conference on Structural Safety and Reliability, Rome, Italy, June 19-23.

71. He, Y., Deodatis, G., Smyth, A., Franco, G. and Gurvich, T. (2005). "Seismic Loss Analysis of Buildings with Damage Correlation," Proceedings of the 9th International Conference on Structural Safety and Reliability, Rome, Italy, June 19-23.

72. Hancilar, U., Durukal, E., Franco, G., Deodatis, G., Erdik, M. and Smyth, A. (2006). "Probabilistic Vulnerability Analysis: An Application to a Typical School Building in Istanbul," Proceedings of First European Conference on Earthquake Engineering and Seismology, Geneva, Switzerland, September 3-8, paper number: 889.

73. He, Y., Deodatis, G., Gurvich, T. and Smyth, A.W. (2006). "Earthquake Loss Estimation Accounting for Structural Non-Ergodic Behavior Over Multiple Earthquake Events," Proceedings of the 5th International Conference on Computational Stochastic Mechanics, Rhodos, Greece, June 21-23.

74. Miranda, M. and Deodatis, G. (2007). "Sensitivity of Response Variability of Statically Indeterminate Bernoulli-Euler Beams with Large Stochastic Variation of System Parameters," Proceedings of the 18th Engineering Mechanics Division Conference, ASCE, Blacksburg, VA, June 3-6.

75. He, Y., Deodatis, G., Gurvich, T. and Smyth, A. (2007). "Estimating Aggregate Seismic Losses of a Building Portfolio Over a Prescribed Time Window, Accounting for Non-Renewable Structural Behavior and Structural Correlation," Proceedings of the 18th Engineering Mechanics Division Conference, ASCE, Blacksburg, VA, June 3-6.

76. Papadopoulos, V., Papadrakakis, M. and Deodatis, G. (2007). "Closed-Form Expressions for the Mean and Mean Square Response of Linear Stochastic Finite Element Systems," Proceedings of the 8th HSTAM International Congress on Mechanics, Patras, Greece, July 12-14.

77. Xu, F., Beyerlein, I., Hu, K. and Deodatis G. (2008). "Multiscale Stochastic Modeling of the Failure of Fiber Reinforced Composites," 10th AIAA Non-Deterministic Approaches Conference, Schaumburg, IL, April 7-10.

78. Miranda, M. and Deodatis, G. (2008). "Generalized Variability Response Functions for Statically Indeterminate Beams With Large Stochastic Variations of Bending Stiffness," Proceedings of the Inaugural International Conference of the Engineering Mechanics Institute, ASCE, Minneapolis, MN, May 18-21.

79. Bocchini, P. and Deodatis, G. (2008). "Recent Developments on a Class of Simulation Algorithms for Strongly Non-Gaussian Fields," Proceedings of the Inaugural International Conference of the Engineering Mechanics Institute, ASCE, Minneapolis, MN, May 18-21.

80. Bocchini, P., Viola, E. and Deodatis, G. (2008). "Simulation of Multi-Dimensional, Strongly Non-Gaussian Random Fields in Mechanics," Italian Association for Theoretical and Applied Mechanics Conference on Stochastic Mechanics, Scopello, Sicily, June 11-12 (only abstract available).

81. Cacciola, P. and Deodatis, G. (2008). "A Method for Generating Fully Non-Stationary Spectrum Compatible Ground Motion Vector Processes," Italian Association for Theoretical and Applied Mechanics Conference on Stochastic Mechanics, Scopello, Sicily, June 11-12 (only abstract available).

82. Teferra, K. and Deodatis, G. (2009). "Bucking of Imperfect Beam Structures: Identification of Critical Length Scales of Random Imperfections Modeled as Random Fields," the 2009 Joint ASCE-ASME-SES Conference on Mechanics and Materials, Blacksburg, VA, June 24-27 (only abstract available).

83. Shields, M. and Deodatis, G. (2009). "Simulation of Non-Stationary Random Processes with Time and Frequency Modulation for Seismic Ground Motion Applications," the 2009 Joint ASCE-ASME-SES Conference on Mechanics and Materials, Blacksburg, VA, June 24-27 (only abstract available).

84. Miranda, M. and Deodatis, G. (2009). "On the Response Variability of Beams with Large Stochastic Variations of System Parameters," Safety, Reliability and Risk of Structures, Infrastructures and Engineering Systems (ISBN 13 978-0-415-47557-0), CRC Press/Balkema, pp. 2641-2648.

85. Bocchini, P. and Deodatis, G. (2009). "Simulation of Strongly Non-Gaussian Multi-Variate Random Fields," Safety, Reliability and Risk of Structures, Infrastructures and Engineering Systems (ISBN 13 978-0-415-47557-0), CRC Press/Balkema, pp. 957-964.

86. Arwade, S. and Deodatis, G. (2010). "Variability Response Functions for Homogenized Material Properties of Statically Determinate Beams," Proceedings of the 6th International Conference on Computational Stochastic Mechanics, Rhodos, Greece, June 13-16, pp. 10-18.

87. Bocchini, P., Frangopol, D.M. and Deodatis, G. (2010). "Computationally Efficient Simulation Techniques for Bridge Network Maintenance Optimization Under Uncertainty," Proceedings of the 6th International Conference on Computational Stochastic Mechanics, Rhodos, Greece, June 13-16, pp. 93-101.

88. Shields, M., Deodatis, G. and Bocchini, P. (2010). "Translation Process Approximation of a General Non-Gaussian Stochastic Process," Proceedings of the 6th International Conference on Computational Stochastic Mechanics, Rhodos, Greece, June 13-16, pp. 522-531.

89. Hiriyur, B., Waisman, H. and Deodatis, G. (2010). "A Stochastic Extended Finite Element Method for Modeling Random Heterogeneous Microstructures," 16th US National Congress of Theoretical and Applied Mechanics, State College, PA, June 2010 (only extended two-page abstract available).

90. Hiriyur, B., Waisman, H. and Deodatis, G. (2010). "Uncertainty Quantification in Homogenization of Heterogeneous Microstructures Modeled by XFEM," Engineering Mechanics Institute 2010 Conference, Los Angeles, CA, August 8-11 2010 (5-page short paper submitted to the computational mechanics student competition and accepted as a finalist – abstract also available).

91. Shields, M. and Deodatis, G. (2010). "A Simple and Efficient Methodology for Simulation of Strongly Non-Gaussian Stochastic Processes and Fields," Engineering Mechanics Institute 2010 Conference, Los Angeles, CA, August 8-11 2010 (only abstract available).

92. Benowitz, B.A., Deodatis, G. and Shields, M. (2011). "Determining Evolutionary Spectra for Non-Stationary Fields from Correlation Functions: Application to Functionally Graded Materials," Engineering Mechanics Institute 2011 Conference, Boston, MA, June 2-4 2011 (only abstract available).

93. Teferra, K., Arwade, S. and Deodatis, G. (2011). "Stochastic Variability of Homogenized Effective Properties via the Generalized Variability Response Function," Engineering Mechanics Institute 2011 Conference, Boston, MA, June 2-4 2011 (only abstract available).

94. Teferra, K. and Deodatis, G. (2011). "Generalized Variability Response Functions for Two-Dimensional and Non-Linear Problems," Engineering Mechanics Institute 2011 Conference, Boston, MA, June 2-4 2011 (only abstract available).

95. Shields, M. and Deodatis, G. (2011). "A Translation-Based Methodology for Simulation of Multi-Variate Strongly Non-Gaussian Stochastic Processes," Engineering Mechanics Institute 2011 Conference, Boston, MA, June 2-4 2011 (only abstract available).

96. Shields, M. and Deodatis, G. (2011). "Simulation of Strongly Non-Gaussian Stochastic Vector Processes Using Translation Process Theory," Proceedings of the 11th International Conference on Applications of Statistics and Probability in Civil Engineering, Zurich, Switzerland, August 1-4, pp. 2727-2734.

Starting here, only papers from conferences with full-length paper proceedings are included

97. Montoya, A., Betti, R., Deodatis, G. and Waisman, H. (2013). "A Stochastic Finite Element Approach to Determine the Safety of Suspension Bridge Cables," Computing in Civil Engineering - Proceedings of the 2013 ASCE International Workshop on Computing in Civil Engineering, pp. 1-8.

98. Kontoroupi, T., Gerasimidis, S., Deodatis, G. and Ettouney, M. (2013). "A 3D nonlinear progressive collapse study of multi-story steel frame buildings accounting for loss of stability," Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures - Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, pp. 5041-5046.

99. Benowitz, B.A., Deodatis, G. and Shields, M.D. (2013). "Simulation of non-gaussian, non-stationary stochastic processes with evolutionary power," Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures - Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, pp. 2805-2810.

100. Lopeman, M., Deodatis, G. and Franco, G. (2013). "A critical comparison of windstorm vulnerability models with application to extra-tropical cyclones in Northern Europe," Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures - Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, pp. 1311-1318.

101. Spyridaki, A., Gerasimidis, S., Deodatis, G. and Ettouney, M. (2013). "A new analytical method on the comparison of progressive collapse mechanisms of steel frames under corner column removal," Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures - Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, pp. 5059-5065.

102. Yan, Y., Gerasimidis, S., Deodatis, G. and Ettouney, M. (2013). "A study on the global loss of stability progressive collapse mechanisms of steel moment frames," Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures - Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, pp. 5075-5080.

103. Benowitz, B.A. and Deodatis, G. (2013). "Simulation of wind velocities on long span structures: A novel stochastic wave based model," Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures - Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, pp. 5549-5553.

104. Shields, M.D. and Deodatis, G. (2013). "Estimation of the evolutionary power spectral density for non-stationary and non-Gaussian translation processes," Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures - Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, pp. 2799-2803.

105. Sideri, J., Gerasimidis, S., Deodatis, G. and Ettouney, M. (2013). "Ductile progressive collapse mechanisms of steel moment frames," Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures - Proceedings of the 11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, pp. 5053-5058.

106. Arwade, S.R., Teferra, K. and Deodatis, G. (2014). "Finite Element Based Variability Response Functions for Effective Material Properties," *Proceedings of the 7th International Conference on Computational Stochastic Mechanics*, Santorini, Greece, June 15-18.

107. Shields, M.D. and Deodatis, G. (2014). “Simulation of Multi-Dimensional, Multi-Variate, Stationary and Non-Stationary, Strongly Non-Gaussian Stochastic Processes: The Iterative Translation Approximation Method (ITAM),” *Proceedings of the 7th International Conference on Computational Stochastic Mechanics*, Santorini, Greece, June 15-18.

Selected Technical Reports

1. Shinozuka, M., Saxena, V. and Deodatis, G. (2000). "Effect of Spatial Variation of Ground Motion on Highway Structures," Technical Report MCEER-00-0013, Multidisciplinary Center for Earthquake Engineering Research, Buffalo, NY, FHWA Contract DTFH61-92-C-00106.

2. Deodatis, G. and Tantala, M. (2001). "Earthquake Loss Estimation Study for Selected Building Blocks in the City of Patras," Technical Report, Department of Civil and Environmental Engineering, Princeton University, prepared for Technical Chamber of Greece, Working Group No. I.2, Estimation of Seismic Vulnerability of Buildings.

3. Tantala, M., Nordenson, G., Deodatis, G., Jacob, K., Swiren, B., Augustyniak, M., Dargush, A., Marrocolo, M. and O'Brien, D. (2005). "Earthquake Risks and Mitigation in the New York, New Jersey, Connecticut Region," NYCEM: the New York City Area Consortium for Earthquake Loss Mitigation, Final Technical Report.