Rajib Chowdhury

Personal Details

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Education

8/2004-7/2008	Ph.D. (Structural Engineering) Indian Institute of Technology Madras, India Thesis: *High dimensional model representation for structural reliability analysis*.
8/2001-3/2003	Master of Engineering (Applied Mechanics) Bengal Engineering and Science University, India Thesis: *A study on cyclic hysteretic behaviour of RC structural element*.
8/1997-7/2001	Bachelor of Engineering (Civil Engineering) University of North Bengal, India.

Employment

7/2012–Present	Assistant Professor, Indian Institute of Technology Roorkee.
7/2011–6/2012	Lecturer, Materials Research Centre, Swansea University.
7/2009–6/2011	Newton Fellow, Swansea University.
11/2008–6/2009	Research Assistant, Swansea University.
3/2004–11/2008	Project Assistant/Project Officer, Indian Institute of Technology Madras, India.

Awards & Honors

08/2015	Newton International Fellowship Alumni award (awarded £6,000).
08/2012	Newton International Fellowship Alumni award (awarded £5,000).
04/2011	Outstanding Paper Award at the Literati Network Awards for Excellence 2011.
11/2008	Awarded the Newton International Fellowship (awarded £100,800) from the Royal Society and Royal Academy of Engineering, UK.
7/2005	Selected in Student Paper Competition at ASME-PVP 2005 Conference, USA.
8/2001	Institute Post-Graduate Fellowship.

Teaching Activities

Structural Dynamics; Finite Element Analysis; Solid Mechanics; Nanoscale Modelling and Simulation; Computer Graphics; Structural Analysis-I; Building Materials, Construction and Estimation.

Research Activities

Areas of Research

1. Uncertainty Quantification and Structural Reliability.
2. Robust Design Optimisation.
3. Micro-structural Aspects of Concrete.
4. Computational Material Science.

Research Publications

Publications include, 2 book (monograph), 4 book chapter, 77 peer reviewed journal papers, 35 conference papers and 4 non-refereed publications (details are in the Appendix). Based on ISI Web of Science so far, the H-index is 17.

Student Supervision

M.Tech.

1. Divyansh Singh [2016-2017], *Title: Studies on Engineered Cementitious Composites*.
2. Umesh Kumar Mourya [2014-2016], *Title: Finite Element Model Updating of Tension Leg Platform*.
3. Singh Bhavesh C. [2014-2016], *Title: Structural Optimization of Offshore Jacket Platform*.
4. Abhishek Agarwal [2014-2016], *Title: Semiconducting Nanostructures for Peizoelectric Application*.
5. Pruthivk B M [2014-2016], *Title: Finite Element Analysis of BWR And PHWR Containment Structure Subjected to Aircraft Crash*. (Co-supervised with Dr. M. A. Iqbal, Civil Engineering)
6. Ranjeet D.Ramteke [2013-2015], *Title: Mechanical properties of nano-silica based high performance concrete*. (Co-supervised with Dr. U. K. Sharma, Civil Engineering)
7. Nidhi Pal [2013-2015], *Title: Processing and Characterisation of Semiconducting Nanostructures*. (Co-supervised with Prof. R. Jayaganathan, Centre of Nanotechnology, IITR)
8. Vaibhab Jain [2012-2014], *Title: Study of Mechanical and Corrosion Properties of UFG Zirconium Alloys: Experiment and Simulation*. (Co-supervised with Prof. R. Jayaganathan, Materials and Metallurgical Engineering, IITR)
9. Rohit Raju Madke [2012-2014], *Title: Multiscale Analysis of Cementious Composites*.
10. Prabir Mondal [2012-2014], *Title: Deformation Mechanism of Calcium Silicate Hydrate(C-S-H)*.
11. Tanmoy Mukhopadhyay [2011-2013], *Title: Damage Detection of Structures using Response Surface Methodology*. (Co-supervised with Dr. A. Chakrabarti, Civil Engineering, IITR)
12. J.V.N.R. Sarma [2011-2013], *Title: Simulation and Experimental Study of Functional Properties of Semiconductor Nanostructures*. (Co-supervised with Prof. R. Jayaganathan, Centre of Nanotechnology, IITR)

Ph.D

1. Rohit Raju Madke [2015-Ongoing], *Topic: Multiscale Modelling and Failure Prediction of Woven and Braided Composites*. (Under MHRD Programme)
2. Tanmoy Chatterjee [2014-Ongoing], *Topic: Novel Integrated Computational Models for Stochastic Evolutionary Optimization*. (Under MHRD Programme)
3. Vipul Bhardwaj [2013-Ongoing], *Topic: Piezoelectric and Mechanical Behaviour of Doped and Undoped ZnO Thin Films*. (Co-supervising with Prof. R. Jayaganathan, Materials and Metallurgical Engineering, IITR)
4. Souvik Chakrabarti [2013-2016 (submitted)], *Topic: A Multilevel Paradigm for Stochastic Computations*. (Under MHRD Programme)
5. Ranveer Shekhawat [2013-Ongoing], *Topic: Micro-structural Properties of Nano-Silica Modified Cementitious Material*. (Under QIP Programme)
6. Sowjanya Motana [2011-2016 (submitted)], *Topic: Optical Properties of Doped and Undoped ZnO Nanostructured Coatings (Experimental and Simulation Studies)*. (Under CSIR Programme) (Co-supervised with Prof. R. Jayaganathan, Centre of Nanotechnology, IITR)

Professional Activities

Editorial Duties

Subject Editor of the Applied Mathematical Modelling [1/2016-].
Editorial Board member of the Applied Mathematical Modelling [1/2016-].
Editorial Board member of the Physics Express [7/2010-12/2013].

Membership

Life Member of Indian Concrete Institute [01/2015-Present].
Engineering Mechanics Institute [10/2012-Present].
Associate Member of the ASCE [10/2012-Present].
Associate Membership of the IoN [01/2011-Present].
American Nano Society[06/2011-Present].

Article Reviewer

1. Computer Methods in Applied Mechanics and Engineering.
2. Applied Mathematical Modelling.
3. Computational Materials Science.
4. Advanced Science Letters (ASL).
5. Mathematical and Computer Modelling.
6. Applied Physics Letters.
7. Numerical Algorithm.
8. Physica E: Low-dimensional Systems & Nanostructures.
9. Open Chemical Physics Journal.
10. Mécanique & Industries.
11. Journal of Physics and Chemistry of Solids.
12. Solid State Sciences.
13. Composites Part B: Engineering.

Appendix: List of Publications

Monograph

1. Sarma, J.V.N., Chowdhury, R., and Jayaganthan, R., Functional properties of semiconducting nanostructures: Simulation and Experiment,, *LAP Lambert Academic Publishing AG & Co. KG*, Paperback: 89 pages, ISBN: 978-3-659-48236-6, 2013.
2. Chowdhury, R., and Rao, B.N., High dimensional model representation for reliability analysis, *VDM Verlag Dr. Müller AG & Co. KG*, Paperback: 296 pages, ISBN: 978-3-639-27580-3, 2010; Amazon ISBN: 3639275802.

Book Chapter

1. Chakraborty, S. and Chowdhury, R., Polynomial Correlated Function Expansion, *Modeling and Simulation Techniques in Structural Engineering*, IGI Global, 2017.
2. Chakraborty, S. and Chowdhury, R., A hybrid approach for solution of Fokker-Planck equation, *Advances in Structural Engineering*, Springer, India, 2015.
3. Chowdhury, R., Rao, B.N., and Prasad, A.M., A practical solution of the random eigenvalue problems using factorized decomposition technique, *Computational Mechanics*, Springer, Heidelberg, 2009.
4. Chowdhury, R., and Rao, B.N. and Prasad, A.M., HDMR based stochastic finite element analysis for random field problems, *Safety, Reliability and Risk of Structures, Infrastructures and Engineering*, CRC Press, Boca Raton, FL, USA, 2009.

Journal Papers

1. Chakraborty, S. and Chowdhury, R., A hybrid approach for global sensitivity analysis, *Reliability Engineering & System Safety*, (2016) (Accepted).
2. Chakraborty, S., Chatterjee, T., Chowdhury, R. and Adhikari, S., Robust design optimization for crashworthiness of vehicle side impact, *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering*, (2016) (Accepted).
3. Chatterjee, T. and Chowdhury, R., An adaptive bi-level approximation technique for multi objective evolutionary optimization, *ASCE Journal of Computing in Civil Engineering*, (2016) (Accepted).
4. Chakraborty, S. and Chowdhury, R., Modelling uncertainty in incompressible flow simulation using Galerkin based generalised ANOVA, *Computer Physics Communications*, (2016) (Accepted).
5. Chakraborty, S. and Chowdhury, R., Sequential experimental design based generalised ANOVA, *Journal of Computational Physics*, (2016) (Accepted).
6. Chakraborty, S. and Chowdhury, R., Moment independent sensitivity analysis - A hybrid PFCE based approach, *ASCE Journal of Computing in Civil Engineering*, (2016) (Accepted).
7. Mukhopadhyay, T., Chakraborty, S. Dey, S., Adhikari, S. and Chowdhury, R., A critical assessment of kriging model variants for high-fidelity uncertainty quantification in dynamics of composite shells, *Archives of Computational Methods in Engineering*, (2016) (Accepted).
8. Mukhopadhyay, T., Chowdhury, R., and Chakraborti, A, R., Structural damage identification: A random sampling-high dimensional model representation approach, *Advances in Structural Engineering, SAGE*, (2016) (Accepted).

9. Bhardwaj, V., Chowdhury, R. and Jayaganathan, R., Nanomechanical and microstructural characterization of sputter deposited ZnO thin films, *Applied Surface Science*, 389 (2016), pp. 1023-1032.
10. Chatterjee, T., Chakraborty, S. and Chowdhury, R., A bi-level approximation tool for the computation of FRFs in stochastic dynamic systems, *Mechanical Systems and Signal Processing*, 70-71 (2016), pp. 484-505.
11. Chakraborty, S. and Chowdhury, R., Assessment of polynomial correlated function expansion for high-fidelity structural reliability analysis, *Structural Safety*, 59 (2016), pp. 9-19.
12. Chakraborty, S. Mandal, B., Chowdhury, R., and Chakraborti, A., Stochastic free vibration analysis of laminated composite plates using polynomial correlated function expansion, *Composite Structures*, 135 [3] (2016), pp. 236-249.
13. Mukhopadhyay, T., Dey, T.K., Chowdhury, R., Chakraborti, A., and Adhikari, S., Optimum design of FRP bridge deck: An efficient RS-HDMR based approach, *Structural and Multidisciplinary Optimization*, 52 [3] (2015), pp. 459-477.
14. Kumar, A., Chakraborti, A., Bhargava, P., and Chowdhury, R., Probabilistic failure analysis of laminated sandwich shells based on higher order zigzag theory, *Journal of Sandwich Structures and Materials*, 17[5] (2015), pp. 546-561.
15. Chakraborty, S. and Chowdhury, R., Multivariate function approximations using D-MORPH algorithm, *Applied Mathematical Modelling*, 39 [23-24] (2015), pp. 7155-7180.
16. Chakraborty, S. and Chowdhury, R., A semi-analytical framework for structural reliability analysis, *Computer Methods in Applied Mechanics and Engineering*, 289 (2015), pp. 475-497.
17. Chakraborty, S. and Chowdhury, R., Polynomial correlated function expansion for nonlinear stochastic dynamic analysis, *ASCE Journal of Engineering Mechanics*, 141[3] (2015), Article No.: 04014132, pp. 1-11.
18. Madke, R. R., Chakraborty, S. and Chowdhury, R., Multiscale approach for the nonlinear behaviour of cementitious composite, *Computational Material Science*, 93 (2014), pp. 29-35.
19. Ray, S. J., and Chowdhury, R., Double gated single molecular transistor for charge detection, *Journal of Applied Physics*, 116 (2014), pp. 034307:1-7.
20. Adhikari, S., Flores, E. I. S., Scarpa, F., Chowdhury, R. and Friswell, M. I., A hybrid atomistic approach for the mechanics of DNA molecules, *ASME Journal of Nanotechnology in Engineering and Medicine*, 4[4] (2014), pp. 041006:1-7.
21. Sarma, J. V. N., Chowdhury, R., Jayaganthan, R., and Scarpa, F., Atomistic studies on tensile mechanics of BN nanotubes in the presence of defects, *International Journal of Nanoscience*, 13[1] (2014), pp. 1450005:1-9.
22. Sarma, J. V. N., Chowdhury, R., and Jayaganthan, R., Graphyne based single electron transistor: ab-initio analysis, *NANO: Brief Reports and Reviews*, 9[3] (2014), pp. 1450032:1-8.
23. Kam, K., Scarpa, F., Adhikari, S., and Chowdhury, R., Graphene nanofilm as pressure and force sensor: a mechanical analysis, *Physica Status Solidi B*, 250[10] (2013), pp. 2085-2089.
24. Sarma, J. V. N., Chowdhury, R., and Jayaganthan, R., Molecular dynamics investigation of the thermomechanical behavior of monolayer GaN, *Journal of Applied Physics*, 113 (2013), pp. 243504:1-7.
25. Allegri, G., Scarpa, F., Chowdhury, R., and Adhikari, S., Wave propagation in periodically supported nanoribbons: A nonlocal elasticity approach, *ASME Journal of Vibration and Acoustics*, 135, (2013), pp. 041017:1-8.

26. Sarma, J. V. N., Chowdhury, R., and Jayaganthan, R., Mechanical behavior of gallium nitride nanosheets using molecular dynamics, *Computational Materials Science*, 75 (2013), pp. 2934.
27. Zhang, J., Wang, C. Y., and Chowdhury, R., and Adhikari, S., Size and temperature dependent piezoelectric properties of gallium nitride nanowires, *Scripta Materialia*, 68[8] (2013), pp. 627630.
28. Chandra, Y., Scarpa, F., Chowdhury, R., Adhikari, S., and Seinz, J., Multiscale hybrid atomistic-FE approach for the nonlinear tensile behaviour of graphene nanocomposites, *Composites Part A: Applied Science and Manufacturing*, 46 (2013), pp. 147153.
29. Zhang, J., Wang, C. Y., and Chowdhury, R., and Adhikari, S., Small-scale effect on the mechanical properties of metallic nanotubes, *Applied Physics Letters*, 101 (2012), pp. 093109:1-4.
30. Chowdhury, R., and Adhikari, S., Fuzzy parametric uncertainty analysis of linear dynamical systems: A surrogate modeling approach, *Mechanical Systems and Signal Processing*, 32 (2012), pp. 5-17.
31. Chowdhury, R., Scarpa, F., and Adhikari, S., Molecular-scale bio-sensing using armchair graphene, *Journal of Applied Physics*, 112[1] (2012), pp. 014905:1-6.
32. Adhikari, S., and Chowdhury, R., Zeptogram sensing from gigahertz vibration: Graphene based nanosensor, *Physica E: Low-dimensional Systems and Nanostructures*, 44[7-8] (2012), pp. 1528-1534.
33. Chowdhury, R., Conductance of graphene nanoribbons under mechanical deformation, *Physica E: Low-dimensional Systems and Nanostructures*, 44[7-8] (2012), pp. 1256-1259.
34. Chandra, Y., Chowdhury, R., Scarpa, F., Adhikari, S., Seinz, J., Arnold, C., Murmu, T., and Bould, D., Vibration frequency of graphene based composites: A multiscale approach, *Materials Science & Engineering B*, 177[3] (2012), pp. 303-310.
35. Chowdhury, R., Adhikari, S., and Rees, P., Graphene based single molecule nanojunction, *Physica B: Condensed Matter*, 407[5] (2012), pp. 855-858.
36. Murugan, S., Chowdhury, R., Adhikari, S., and Friswell, M.I., Helicopter aeroelastic analysis with specially uncertain rotor blade properties, *Aerospace Science and Technology*, 16[1] (2012), pp. 29-39.
37. Dutta, S. C., and Chowdhury, R., Effect of gravity loading on inelastic seismic demand of structures, *Journal of Earthquake and Tsunami*, 6[4] (2012), pp. 1250022:1-16..
38. Boldrin, L., Scarpa, F., Chowdhury, R., and Adhikari, S., Effective mechanical properties of hexagonal boron nitride nanosheets, *Nanotechnology*, 22[50] (2011), pp. 505702:1-7.
39. Chandra, Y., Chowdhury, R., Adhikari, S., and Scarpa, F., Elastic instability of bilayer graphene using atomistic finite element, *Physica E: Low-dimensional Systems and Nanostructures*, 44[1] (2011), pp. 12-16.
40. Scarpa, F., Chowdhury, R., Kam, K., Adhikari, S., and Ruzzene, M., Dynamics of mechanical waves in periodic graphene nanoribbon assemblies, *Nanoscale Research Letters*, 6 (2011), pp. 430:1-10.
41. Chowdhury, R., and Adhikari, S., Boron nitride nanotubes as zeptogram-scale bio-nano sensors: Theoretical investigations, *IEEE Transactions on Nanotechnology*, 10[4] (2011), pp. 659-667.
42. Chandra, Y., Chowdhury, R., Scarpa, F., and Adhikari, S., Vibration characteristics of bi-layer graphene sheets, *Thin Solid Films*, 519[18] (2011), pp. 6026-6032.
43. Adhikari, S., and Chowdhury, R., Natural frequencies of fullerene family, *Physics Letters A*, 375[22] (2011), pp. 2166-2170.

44. Chowdhury, R., and Rao, B.N., Multicut high dimensional model representation for reliability analysis, *Structural Engineering and Mechanics - An International Journal*, 38[5] (2011), pp. 651-674.
45. Chowdhury, R., Adhikari, S., Scarpa, F., and Friswell, M.I., Transverse vibration of single layer graphene sheets, *Journal of Physics D: Applied Physics*, 44[20] (2011), pp. 205401:1-11.
46. Scarpa, F., Chowdhury, R., and Adhikari, S., Thickness and in-plane elasticity of Graphane, *Physics Letters A*, 375[20] (2011), pp. 2071-2074.
47. Chowdhury, R., and Adhikari, S., Reliability analysis of uncertain dynamical systems using correlated function expansion, *International Journal of Mechanical Sciences*, 53[4] (2011), pp. 281-285.
48. Chowdhury, R., Adhikari, S., and Scarpa, F., Vibration of ZnO nanotubes: A molecular mechanics approach, *Applied Physics A: Materials Science & Processing*, 102[2] (2011), pp. 301-308.
49. Adhikari, S., Chowdhury, R. and Friswell, M.I., High dimensional model representation method for fuzzy structural dynamics, *Journal of Sound and Vibration*, 330[7] (2011), pp. 1516-1529.
50. Chowdhury, R. Adhikari, S., Rees, P., Scarpa, F. and Wilks, S.P., Graphene-based biosensor using transport properties, *Physical Review B*, 83[4] (2011), pp. 045401:1-8.
51. Chowdhury, R., Rao, B.N., Probabilistic stability assessment of slopes using high dimensional model representation, *Computers & Geotechnics*, 37[7-8] (2010), pp. 876-884.
52. Chowdhury, R., Adhikari, S., and Rees, P., Optical properties of Silicon doped ZnO, *Physica B: Condensed Matter*, 405[23] (2010), pp. 4763-4767.
53. Chowdhury, R., and Adhikari, S., Stochastic sensitivity analysis using enhanced HDMR and score function, *Engineering Computations*, 27[7] (2010), pp. 841-862.
54. Adhikari, S., and Chowdhury, R., A reduced-order random matrix approach for stochastic structural dynamics, *Computers & Structures*, 88[21-22] (2010), pp. 3917-3932.
55. Chowdhury, R., Wang, C.Y., Adhikari, S., and Scarpa, F., Vibration and symmetry-breaking of boron-nitride nanotubes, *Nanotechnology*, 107[21] (2010), pp. 365702:1-9.
56. Adhikari, S., and Chowdhury, R.,The calibration of carbon nanotube based bionanosensors, *Journal of Applied Physics*, 107[12] (2010), pp. 124322:1-8.
57. Chowdhury, R., Wang, C.Y., Adhikari, S., and Tong, F.M., Sliding oscillation of multiwall carbon nanotubes, *Physica E: Low-dimensional Systems and Nanostructures*, 42[9] (2010), pp. 2295-2300.
58. Chowdhury, R., Rao, B.N., and Prasad, A.M., Hybrid high dimensional model representation for failure probability estimation, *Journal of Structural Engineering, SERC*, 37[2] (2010), pp. 188-199.
59. Chowdhury, R., and Adhikari, S., High dimensional model representation for stochastic finite element analysis, *Applied Mathematical Modelling*, 34[12] (2010), pp. 3917-3932.
60. Rao, B.N., Chowdhury, R., Prasad A.M., Singh, R.K., and Kushwaha, H.S., Reliability analysis of 500 MWe PHWR inner containment using high dimensional model representation, *International Journal of Pressure Vessels and Piping*, 87[5] (2010), pp. 230-238.
61. Chowdhury, R., Adhikari, S., Wang, C. Y., and Scarpa, F., A molecular mechanics approach for the vibration of single walled carbon nanotubes, *Computational Materials Science*, 48[4] (2010), pp. 730-735.
62. Chowdhury, R., Adhikari, S., and Scarpa, F., Elasticity and piezoelectricity of zinc oxide nanostructure, *Physica E: Low-dimensional Systems and Nanostructures*, 42[8] (2010), pp. 2036-2040.

63. Scarpa, F., Adhikari, S., and Chowdhury, R., Transverse elasticity of bilayer graphene, *Physics Letters A*, 374[19-20] (2010), pp. 2053-2057.
64. Chowdhury, R., Rees, P., Adhikari, S., Scarpa, F., and Wilks, S.P., Electronic structures of Silicon doped ZnO, *Physica B: Condensed Matter*, 405[8] (2010), pp. 1980-1985.
65. Chowdhury, R., Wang, C. Y., and Adhikari, S., Low frequency vibration of multiwall carbon nanotubes with heterogeneous boundaries, *Journal of Physics D: Applied Physics*, 43[11] (2010), pp. 085405:1-8.
66. Chowdhury, R., Adhikari, S., and Mitchell, J., Vibrating carbon nanotube based bio-sensors, *Physica E: Low-dimensional Systems and Nanostructures*, 42[2] (2009), pp. 104-109.
67. Chowdhury, R., Rao, B.N., and Prasad, A.M., Stochastic sensitivity analysis using HDMR and score function, *Sādhanā - Proceedings of the Indian Academy of Engineering Sciences*, 34[6] (2009), pp. 967-986.
68. Rao, B.N., Chowdhury, R., Prasad A.M., Singh, R.K., and Kushwaha, H.S., Probabilistic characterization of AHWR inner containment using high dimensional model representation, *Nuclear Engineering and Design*, 239[6] (2009), pp. 1030-1041.
69. Chowdhury, R., Rao, B.N., and Prasad, A.M., High dimensional model representation for structural reliability analysis, *Communications in Numerical Methods in Engineering*, 25[4] (2009), pp. 301-337.
70. Chowdhury, R., and Rao, B.N., Hybrid high dimensional model representation for reliability analysis, *Computer Methods in Applied Mechanics and Engineering*, 198[5-8] (2009), pp. 753-765.
71. Rao, B.N., and Chowdhury, R., Enhanced high dimensional model representation for reliability analysis, *International Journal for Numerical Methods in Engineering*, 77[5] (2009), pp. 719-750.
72. Chowdhury, R., and Rao, B.N., Assessment of high dimensional model representation techniques for reliability analysis, *Probabilistic Engineering Mechanics*, 24[1] (2009), pp. 100-115.
73. Rao, B.N., and Chowdhury, R., Factorized high dimensional model representation for structural reliability analysis, *Engineering Computations*, 25[8] (2008), pp. 708-738.
74. Chowdhury, R., and Rao, B.N., Structural failure probability estimation using HDMR and FFT, *Electronic Journal of Structural Engineering*, 8(2008), pp. 67-76 (Online).
75. Chowdhury, R., Rao, B.N., and Prasad, A.M., High dimensional model representation based higher order limit state function for reliability analysis, *Journal of Structural Engineering, SERC*, 36[6] (2008), pp. 393-405.
76. Rao, B.N., and Chowdhury, R., Probabilistic analysis using high dimensional model representation and fast fourier transform, *International Journal for Computational Methods in Engineering Science and Mechanics*, 9 (2008), pp. 342-357.
77. Chowdhury, R., Rao, B.N., and Prasad, A.M., High dimensional model representation for piece wise continuous function approximation, *Communications in Numerical Methods in Engineering*, 24[12] (2008), pp. 1587-1609.
78. Chowdhury, R., Rao, B.N., and Prasad, A.M., Development of a new bi-directional hysteresis model for RC structural element, *Journal of Structural Engineering, SERC*, 34[2] (2007), pp. 88-94.

Conference Papers

1. Chakraborty, S., and Chowdhury, R., Solution of stochastic heat conduction problem using galerkin based polynomial correlated function expansion, *6th International Conference on Computational Mechanics and Simulation (ICCMS 2016)*, IIT Bombay, India, June 27-July 01, 2016.

2. Chakraborty, S., Chatterjee, T., Chowdhury, R. and Adhikari, S., An efficient framework for robust design optimization, *The 13th International Probabilistic Workshop (IPW2015)*, University of Liverpool, U.K., November 4-6, 2015.
3. Chakraborty, S., and Chowdhury, R., Nonlinear stochastic dynamics analysis - A metamodelling based approach, *1st International Conference on Uncertainty Quantification in Computational Sciences and Engineering*, Crete Island, Greece, May 25-27, 2015.
4. Chakraborty, S., and Chowdhury, R., A hybrid approach for solution of Fokker-Planck equation, *Structural Engineering Convention 2015*, IIT Delhi, Dec 22-24, 2014.
5. Chakraborty, S., and Chowdhury, R., Uncertainty propagation using hybrid HDMR for stochastic field problems, *International Conference on Structural Engineering and Mechanics*, NIT Rourkela, Dec 20-23, 2013. **(Best Student Paper Award)**
6. Mukhopadhyay, T., Chowdhury, R., and Chakrabarti, A., A methodology for improving response surfaces and its application in structural damage identification and reliability analysis, *iNaCoMM 2013*, IIT Roorkee, Dec 20-23, 2013.
7. Mukhopadhyay, T., Chowdhury, R., and Chakrabarti, A., A metamodel based approach for structural damage identification using D-optimal design and Nelder-Meade simplex optimization method, *International Conference On ?Sustainable Innovative Techniques In Civil and Environmental Engineering*, Jawaharlal Nehru University, New Delhi, June 5-6, 2013.
8. Masanam, S.M., Chowdhury, R., Adhikari, S., and Friswell, M.I., Effects of spatially uncertain structural properties on helicopter aeroelastic response predictions using high dimensional model representation, *52th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference*, Denver, USA, April 2011.
9. Masanam, S.M., Chowdhury, R., Adhikari, S., and Friswell, M.I., Effects of spatially uncertain structural properties on helicopter aeroelastic response predictions using high dimensional model representation, *52th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference*, Denver, USA, April 2011.
10. Rao, B.N., Chowdhury, R., Singh, R.K., and Kushwaha, H.S., Structural reliability analysis of AHWR and PHWR inner containment using high dimensional model representation,*2nd International Conference on Reliability, Safety And Hazard - Risk-Based Technologies And Physics - of Failure Methods*, Mumbai, India, December 14-16, 2010.
11. Adhikari, S., Chowdhury, R. and Friswell, M.I., Fuzzy finite element analysis using high dimensional model representation, *International Conference on Uncertainty in Structural Dynamics, (USD 2010)*, Leuven, Belgium, September 20-22, 2010.
12. Chowdhury, R., Adhikari, S., A non-linear dimension reduction methodology for the frequency response functions of uncertain structural systems, *5th ASRANet International Colloquium (ASRANet2010)*, Edinburgh, Scotland, June 14-16, 2010.
13. Scarpa, F., Ruzzene, M., Adhikari, S. and Chowdhury, R., Wave propagation and structural dynamics in graphene nanoribbons, *SPIE Smart Structures, Materials, Nondestructive Evaluation and Health Monitoring Conference*, San Diego, California, USA, March 2010.
14. Chowdhury, R., Adhikari, S., and Scarpa, F., Electronic properties of graphene nanoribbons coupled with organic molecules, *ASME 2010 First Global Congress on NanoEngineering for Medicine and Biology (NEMB2010)*, Houston, TX, USA, February 7-10, 2010.
15. Chowdhury, R., Rao, B.N., and Prasad, A.M., HDMR based stochastic finite element analysis for random field problems, *10th International Conference on Structural Safety and Reliability (ICOSSAR2009)*, Osaka, Japan, September 13-17, 2009.

16. Chowdhury, R., Rao, B.N., and Prasad, A.M., Hybrid HDMR based sensitivity analysis for stochastic fracture mechanics, *Proceedings of 2009 ASME Pressure Vessels and Piping Conference*, Prague, Czech Republic, September 26-30, 2009.
17. Chowdhury, R., and Adhikari, S., MPP-based correlated function expansion for reliabilities and moments of uncertain dynamical system, *2nd International Conference on Uncertainty in Structural Dynamics (USD 2009)*, Sheffield, UK, June 15-17, 2009.
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