

E. BIOGRAPHICAL SKETCHES

SHARIF RAHMAN

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A. Professional Preparation

Bangladesh University of Engineering and Technology	Civil Engineering	B.Sc. (1984); 1 st Class (Honors)
Purdue University	Structural Mechanics	M.S. (1986); GPA=6.0 (A=6.0)
Cornell University	Solid Mechanics	Ph.D. (1991); GPA=4.06 (A=4.0)

B. Appointments

Professor, The University of Iowa, 2005-Present
Associate Professor, The University of Iowa, 2001-2005
Assistant Professor, The University of Iowa, 1995-2001
Research Scientist, Battelle Columbus Laboratories, 1990-1995
Graduate Research Assistant, Cornell University, 1987-1990
Teaching Assistant, Purdue University, 1985-1986
Lecturer, Bangladesh University of Engineering and Technology, 1984-1985

C. Publications

Professor Rahman has over **200** publications, consisting of **11** edited/co-edited conference proceedings, **65** journal papers (57 published or in press, 8 under review), **114** rigorously reviewed conference papers (104 published, 10 under review), **18** moderately reviewed papers (distributed), and **24** technical reports (distributed).

C.1 Five Publications Closely Related to Proposed Project:

1. Rao, B.N. and Rahman, S., "An Enriched Meshless Method for Nonlinear Fracture Mechanics," *International Journal for Numerical Methods in Engineering*, Vol. 59, pp. 197-223, 2004.
2. Rao, B. N. and Rahman, S., "Mesh-free Analysis of Cracks in Isotropic Functionally Graded Materials," *Engineering Fracture Mechanics*, Vol. 70, No. 1, 2003, pp. 1-27, 2003.
3. Rao, B. N. and Rahman, S., "An Interaction Integral Method for Analysis of Cracks in Orthotropic Functionally Graded Materials," *Computational Mechanics*, Vol. 32, No. 1-2, pp. 40-51, 2003.
4. Xu, H. and Rahman, S., "A Generalized Dimension-Reduction Method for Multi-Dimensional Integration in Stochastic Mechanics," *International Journal for Numerical Methods in Engineering*, Vol. 61, pp. 1992-2019, 2004.
5. Rahman, S. and Chen, G., "Continuum Shape Sensitivity and Reliability Analyses of Nonlinear Cracked Structures," *International Journal of Fracture*, Vol. 131, No. 2, pp. 189-209, 2005.

C.2 Five Other Significant Publications for Proposed Project:

1. Rao, B. N. and Rahman, S., "A Continuum Shape Sensitivity Method for Fracture Analysis of Orthotropic Functionally Graded Materials," *Mechanics of Materials*, Vol. 37, No. 10, pp. 1007-1025, 2005.
2. Xu, H. and Rahman, S., "Decomposition Methods for Structural Reliability Analysis," *Probabilistic Engineering Mechanics*, Vol. 20, pp. 239-250, 2005.
3. Rao, B. N. and Rahman, S., "Stochastic Meshless Analysis of Elastic-Plastic Cracked Structures," *Computational Mechanics*, Vol. 32, No. 3, pp. 199-223, 2003.
4. Chen, G., Rahman, S. and Park, Y. H., "Shape Sensitivity Analysis in Mixed-Mode Fracture Mechanics," *Computational Mechanics*, Vol. 27, No. 4, pp. 282-291, 2001.
5. Rahman, S. and Rao, B. N., "A Perturbation Method for Stochastic Meshless Analysis in Elastostatics," *International Journal for Numerical Methods in Engineering*, Vol. 50, No. 8, pp. 1969-1991, 2001.

D. Synergistic Activities

Associate Editor, ASME Journal of Pressure Vessel Technology, 1999-2005
Member, Editorial Board of Engineering Fracture Mechanics, 2004-Date
Chairman, ASME Material & Fabrication Committee (2001-2005)
Chair/Developer, 62 technical symposia/sessions in ASME/ASCE/USACM conferences
Member, ASCE; ASME; ASEE; IASSAR; USACM; and ISCES
Reviewer, NSF proposals (23), Journals Papers (80), and Books (2)
Invited Lectures, 25 universities in U.S., Europe, and Asia

E. Collaborators & Other Affiliations

E.1 Collaborators and Co-Editors: Professors K. K. Choi (Iowa), M. Grigoriu (Cornell), T. Smith (Iowa), L. Sun (UC Irvine), S. Xiao (Iowa), and S. Zamrik (Penn State).

E.2 Graduate and Postdoctoral Advisors: (i) *Graduate Advisors:* Professors J. T. Gaunt (Purdue), M. Grigoriu (Cornell); (ii) *Postdoctoral Advisors:* None.

E.3 Thesis Advisor and Postgraduate-Scholar Sponsor: (i) *Ph.D. Students (7):* G. Chen, Y. Cheng, B. N. Rao, A. Chakraborty, D. Wei, H. Xu, and T. Zhang,; (ii) *MS Students (5):* R. Firmature, J. Foxen, M. Francis, J. Kim, C. Rajyaguru; (iii) *Postdoctoral Sponsor (1):* B. N. Rao.

F. Others (Honors and Awards)

PVPD Outstanding Award, ASME, 2006
ASME Certificates (2) of Appreciation, ASME, 2005
The University of Iowa Faculty Scholar Award, The University of Iowa, 2004-2007
IASSAR Research Prize, International Assoc. for Structural Safety & Reliability (International), 2001
Iowa daVinci Celebration & Conference Medallion & Certificate of Recognition, State of Iowa, 2001
ASEE Outstanding New Mechanics Educator Award, ASEE (National), 1999
The James N. Murray Faculty Award (Outstanding Faculty), The University of Iowa, 1999
NSF CAREER Award, National Science Foundation (National), 1998
NASA Certificate of Recognition, NASA (National), 1997
ASME Certificates of Recognition, ASME (National), 1997
Iowa Old Gold Fellowship, The University of Iowa, 1996
Battelle Award, Battelle Columbus Laboratories, 1995
BUET Merit Scholarship, BUET, 1981-1984
University Grants Commission Award, Bangladesh Ministry of Education, 1983