

## **CURRICULUM VITAE**

### **Sara Wadia-Fascetti**

Associate Professor of Civil & Environmental Engineering  
Director of ADVANCE  
Special Assistant to the Provost for Faculty Development

419 Snell Engineering Center  
Northeastern University  
Boston, Massachusetts 02115  
617-373-4248 (phone), 617-373-4419 (fax)  
swf@neu.edu, <http://www.coe.neu.edu/~swf>

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## EDUCATION / EMPLOYMENT HISTORY

### EDUCATION

- 1991 - 1994     **Doctor of Philosophy** in Civil Engineering; Stanford University, Stanford, CA. (Sept. 1994). Dissertation: “*Adaptive Dynamic Analysis Considering Structural Lifespan: An Approach Based on Fuzzy Mathematics.*” Advisor: Professor H. Allison Smith
- 1990 - 1991     **Master of Science** in Civil Engineering (emphasis in Structural Engineering); Stanford University, Stanford, CA. (Sept. 1991)
- 1986 - 1990     **Bachelor of Science** in Civil Engineering (with a double major in Engineering and Public Policy); Carnegie Mellon University, Pittsburgh, PA. (June 1990)

### PROFESSIONAL EXPERIENCE

*During the period between 2001 and 2005 significant effort was invested in the development of several university-level major initiatives that have led to funded programs for the advancement of women, the training of doctoral students, and the support of long-term research related to infrastructure diagnostics. The administrative responsibilities for these programs are listed below as part of professional experience.*

- 2000 – present   **Associate Professor** of Civil Engineering, Department of Civil and Environmental Engineering, Northeastern University, Boston, MA.
- 2008 – present   **Director of ADVANCE & Special Assistant to the Provost for Faculty Development.** *Responsibilities:* 50% appointment reporting to Vice Provost for Academic Affairs to lead the Northeastern ADVANCE program and to support faculty mentoring program.
- 2009 – present   **Deputy Director and co-Principal Investigator,** VOTERS project established through funding from the National Institute of Standards and Technology, Technology Innovation Program.
- 2008 – present   **Member Executive Committee,** Gordon – CenSSIS Engineering Research Center and lead for infrastructure-related research.
- 2007 – present   **Director and Principal Investigator,** Intelligent Diagnostics IGERT (Integrated Graduate Education and Research Traineeship) Doctoral Fellowship Program.
- 2005 – 2008      **Associate Vice-Provost for Faculty Advancement** (Acting 2005 – 2006), Northeastern University. *Responsibilities:* 50% appointment reporting to Provost to develop and oversee programs that advance faculty especially those who are underrepresented.
- 2004 – 2009      **Director and Principal Investigator,** GAANN (Graduate Assistance in Areas of National Need) Doctoral Fellowship Program for Sensing, Identification, Diagnostics, & Rehabilitation of Structural systems.

## **EDUCATION / EMPLOYMENT HISTORY: PROFESSIONAL EXPERIENCE** *(continued)*

- 2001 – 2002 **Visiting Associate Professor** of Civil Engineering, Department of Civil and Environmental Engineering, Tufts University, Medford, MA.
- 1999 – 2004 **Founding Director**, CONNECTIONS, program to strengthen pathways for women to pursue careers in engineering and science.
- 1994 – 2000 **Assistant Professor** of Civil Engineering, Department of Civil and Environmental Engineering, Northeastern University, Boston, MA.
- 1990 Received “Engineer – In – Training” qualification a prerequisite for the Professional Engineer exam.
- 1990 **Manufacturing Engineering Intern**, Lockheed Martin Systems Space Systems Division, Sunnyvale, CA. May 1990 – August 1990.

## **PROFESSIONAL RECOGNITION: HONORS AND AWARDS**

### ***National Recognition***

- 2006 **Sharon Keillor Award for Women in Engineering Education**, for comprehensive distinguished accomplishments in engineering scholarship, education, and administration, American Society of Engineering Education National Award.
- 2005 **Progress in Equity Award**, awarded to CONNECTIONS, a national award offered by the American Association of University Women. CONNECTIONS is a program to strengthen the pathways of women and girls to pursue careers in engineering and science originally funded with a grant from the National Science Foundation in 1999 with Wadia-Fascetti as Principal Investigator.
- 2004 **Massachusetts Progress in Equity Award**, awarded to CONNECTIONS by the Massachusetts chapter of the American Association of University Women.
- 2002 **Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring**, awarded at the White House March 18, 2003 and selected through the Office of Science and Technology Policy and the National Science Foundation.
- 2002 **Minorities in Engineering Award**, for leadership related to the recruitment and retention of women in engineering, American Society of Engineering Education National Award.
- 1997 **CAREER Development Award**, National Science Foundation.

### ***Institutional Recognition***

- 2008 **Nominated** by Northeastern University for **University Change Agent Award** sponsored by the Women in Engineering ProActive Network (WEPAN). One nomination allowed per institution.
- 2006 **Phi Kappa Phi**, inducted to Northeastern chapter in 2006. Membership (invitation only) is offered to recognize and promote academic excellence in all fields of higher education.

## **EDUCATION / EMPLOYMENT HISTORY: PROFESSIONAL RECOGNITION** *(continued)*

- 2004 **Northeastern Distinguished Research Fellow**, (2004 – 2007) Northeastern University. There were 9 Research Fellows identified in 2004, the year the program was inaugurated.
- 2002 **President's Aspiration Award**, from Northeastern President Freeland, for leadership related to Northeastern University's aspirations to become a national research student-centered urban university.
- 1997 **Civil Engineering Professor of the Year**, Northeastern University Chi Epsilon Student Chapter.

## **LEADERSHIP IN PROGRAM DEVELOPMENT**

*Responsible for the conceptualization, development, and implementation of institutional programs. These programs, which emanated through a variety of mechanisms, have been structured to achieve significant institutional impact with the objective of sustainability. In each case, program success has been enhanced through interdisciplinary cooperation with involvement from a number of faculty, professional staff, and members of the administration. These programs are described below. Web links are provided to program websites.*

### ***Technical Programs***

**VOTERS**, funded in 2009 by the National Institute of Standards and Technology (NIST) Technology Innovation Program, was developed in collaboration with Dr. Ming L. Wang (VOTERS PI) and an interdisciplinary team of researchers with three partnering institutions to achieve compact and mobile wave based sensors to be used on vehicles of opportunity to create a paradigm shift in bridge deck and pavement inspection. The VOTERS team includes about 40 faculty, research scientists, administrative staff, and graduate students from three universities as well as research engineers from two industrial joint venture partners. VOTERS engages 6 Northeastern faculty and 12 students annually. *Wadia-Fascetti serves as Deputy Director and co-PI of this five year grant, which serves as a seed for the development of a center focused on infrastructure assessment. Press release: <http://tinyurl.com/nist-voters>.*

**Infrastructure Intelligent Diagnostics Doctoral Trainee Programs** referred to now as the **Intelligent Diagnostics IGERT** (<http://www.igert-id.neu.edu>) for Aging Civil Infrastructure Trainee program awarded in 2007. The initial program was funded by the Department of Education program for Graduate Assistance in Areas of National Need (GAANN) in 2004 with four 3 – year doctoral fellowships. The GAANN program supported more than 6 distinct students who pursued or have completed the PhD degree in Civil, Mechanical, or Electrical Engineering, in which, 2 have completed the PhD, 2 have passed the qualifying exam, and 2 are pre-quals. The NSF – funded IGERT, Intelligent Diagnostics for Aging Civil Infrastructure, extends to include political science, public policy, and computer science in a multi – institutional educational and research partnership with the University of Puerto Rico at Mayaguez to support ~27 PhD students with 2 year fellowships across both campuses. IGERT leadership includes faculty from across the College of Engineering and the School of Social Science, Urban Affairs, and Public Policy at Northeastern and the University of Puerto Rico. *S. Wadia-Fascetti serves as Director and PI of the IGERT and GAANN grants.*

## **EDUCATION / EMPLOYMENT HISTORY**

### **LEADERSHIP IN PROGRAM DEVELOPMENT** *(continued)*

#### ***Institutional Development Programs***

**Northeastern ADVANCE** (<http://www.neu.edu/advance>) is an institutional transformation program funded by the National Science Foundation in 2008 to promote the increased participation and advancement of women scientists and engineers at Northeastern through systemic change at the university. Northeastern ADVANCE reports to the Office of the Provost and implements innovative approaches for the recruitment and advancement of women faculty and engages campus leaders to bring gender balance into the center of Northeastern's strategic plan. The grant is implemented with a team of 7 faculty and administrators, a program manager, postdoctoral research associate, and graduate students. *S. Wadia-Fascetti serves as Director and PI of the five-year ADVANCE grant.*

#### **Office of the Associate Vice – Provost for Faculty Advancement**

(<http://www.facultymentoring.neu.edu>) developed and implemented programs for career advancement of faculty. Oversaw and expanded university-wide faculty mentoring program, established faculty mentoring website to provide consistent information about policies and procedures, managed the revision of the tenure clock extension policy through university systems; initiated provost grant funds for faculty advancement and faculty leadership development opportunities, represented the institution in faculty quality of life surveys and studies, identified and implemented a series of programs and workshops related to tenure / promotion and scholarship development. The Office was created in September 2005 and the programs continue through Northeastern ADVANCE and the Office of the Vice Provost for Academic Affairs as of 2008.

**CONNECTIONS** (<http://connections.coe.neu.edu>) is a program to strengthen the pathways of women and girls to pursue careers in engineering and science was originally funded with a grant from the National Science Foundation in 1999. Activities and programs include a number of activities designed to improve academic and career success and to improve student networking within and outside the institution. Outcomes include increased enrollment and retention of women in engineering students; long – term mentorship; and increase in women's confidence in academic ability. The CONNECTIONS program itself and many of its participants have received significant local and national recognition. CONNECTIONS continues under the leadership of Rachelle Reisberg, Director of Women in Engineering. *S. Wadia-Fascetti served as the founding Director and PI of the four – year CONNECTIONS grant.*

## SCHOLARSHIP / RESEARCH

*Research areas incorporate the use of nondestructive technologies for civil infrastructure assessment and diagnostics for improved planning and management systems.*

## PUBLICATIONS

*The Digital Object Identifier (DOI) is included if available. Student authors or authors who are former students supervised by S. Wadia-Fascetti are denoted by †.*

### ***Refereed (Peer Reviewed) Articles in Journals (In Print, In Press, or Accepted.)***

1. Belli<sup>†</sup>, K. Rappaport, C., Zhan, H. **Wadia-Fascetti, S.** (In Press, 2009) “Effectiveness of 2-D and 2.5-D FDTD Ground-Penetrating Radar Modeling for Bridge Deck Deterioration Evaluated by 3-D FDTD.” *IEEE Transactions in Geoscience and Remote Sensing*. DOI: 10.1109/TGRS.2009.2016846.
2. Belli<sup>†</sup>, Rappaport, **Wadia-Fascetti** (In Press, 2009) “Forward Time Domain Ground Penetrating Radar Modeling of Scattering from Anomalies in the Presence of Steel Reinforcements.” *Research in Nondestructive Evaluation*. Taylor and Francis, Taylor and Francis Group. **20**(4) pp. 1 – 22. DOI: 10.1080/09349840902788777.
3. Belli<sup>†</sup>, Zhan, **Wadia-Fascetti**, Rappaport (2009) “Comparison of the Accuracy of 2D vs. 3D FDTD Air-Coupled GPR Modeling of Bridge Deck Deterioration.” *Research in Nondestructive Evaluation*. Taylor and Francis, Taylor and Francis Group. **20**(2) pp. 94 – 115. DOI: 10.1080/09349840802610147.
4. Belli<sup>†</sup>, K., **Wadia-Fascetti, S.**, Rappaport, C. (2008) “Model Based Evaluation of Bridge Decks Using Ground Penetrating Radar” *Computer-Aided Civil and Infrastructure Engineering*. Blackwell Publishers. **23**(1) pp. 3 – 16. DOI: 10.1111/j.1467-8667.2007.00516.x.
5. LeBeau<sup>†</sup>, K., **Wadia-Fascetti, S.** (2007) “Comparative Probabilistic Initial Bridge Load Rating Model” *Journal of Bridge Engineering*, American Society of Civil Engineering. **12**(6) pp. 785 – 793. DOI: 10.1061/(ASCE)1084-0702(2007)12:6(785).
6. LeBeau<sup>†</sup>, K., **Wadia-Fascetti, S.** (2007) “Fault Tree Analysis of Schoharie Bridge Collapse.” *Journal of Performance of Constructed Facilities*, American Society of Civil Engineering. **21**(4) pp. 320 – 326. DOI: 10.1061/(ASCE)0887-3828(2007)21:4(320).
7. Chiu, Arthur N. L., Chiu, Gregory. L. F, and **Wadia-Fascetti, S.** (2001) “The Investigation of Topographic Effects on Spatial Damage Distribution in Hurricane Iniki,” *Journal of Wind Engineering*, Number 80. pp: 577 – 579. Conference paper peer reviewed and accepted for publication in journal.

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<sup>†</sup> Student author.

## SCHOLARSHIP / RESEARCH: PUBLICATIONS: REFEREED JOURNAL (continued)

8. Sanayei, M., **Wadia-Fascetti, S.**, Ayra<sup>†</sup>, B., Santini<sup>†</sup>, E. (2001) "Significance of Modeling Error in Structural Parameter Estimation." *Computer-Aided Civil and Infrastructure Engineering*. **16**(1). pp. 12-27. DOI: 10.1111/0885-9507.00210.
9. **Wadia-Fascetti, S.** and Leventman, P. G. (2000) "E-Mentoring: A Longitudinal Approach to Mentoring Relationships for Women Pursuing Technical Careers." American Society of Engineering Education (ASEE) *Journal of Engineering Education*. **89**(3). pp. 295-300.
10. **Wadia-Fascetti, S.** and Gunes<sup>†</sup>, B., (2000) "Earthquake Response Spectra Models Incorporating Fuzzy Logic with Statistics." *Computer-Aided Civil and Infrastructure Engineering*. **15**(2). pp. 134-146. DOI: 10.1111/0885-9507.00178.
11. Chiu, G. L. F. and **Wadia-Fascetti, S.** (1999) "Assessment and Quantification of Hurricane Induced Damage to Houses." *Wind and Structures, An International Journal*. **2**(3), pp. 133-150.
12. Sanayei, M., McClain<sup>†</sup>, J., **Wadia-Fascetti, S.**, Santini<sup>†</sup>, E. (1999) "Parameter Estimation Incorporating Modal Data and Boundary Conditions." *Journal of Structural Engineering*. American Society of Civil Engineers. **125**(9), pp. 1048-1055. DOI: 10.1061/(ASCE)0733-9445(1999)125:9(1048).
13. **Wadia-Fascetti, S.** and Smith, H. A., (1996) "Calibration of Structural Models Using Fuzzy Mathematics." (Invited paper) *Microcomputers in Civil Engineering*. **11**(1), pp. 19-35. DOI: 10.1111/j.1467-8667.1996.tb00306.x.
14. Smith, H. A. and **Wadia, S. J.**, (1992) "Adaptive Design Models Considering Lifespan of Buildings." *Journal of Intelligent Material Systems and Structures*. **3**(4), pp. 585-599. DOI: 10.1177/1045389X9200300403.

## Refereed (Peer Reviewed) Articles in Edited Books

15. Belli<sup>†</sup>, K., **Wadia-Fascetti, S.**, Rappaport, C. (2004) "Integrated Modeling Environment for Subsurface Sensing." *Smart Structures*. Edited by C.-B. Yun & L. Bergman, Techno – Press. pp. 125 – 136, 2004.
16. Gunes<sup>†</sup>, B. Arya<sup>†</sup>, B., **Wadia-Fascetti, S.**, Sanayei, M. (1999) "Practical Issues in the Application of Structural Identification." in *Computational Mechanics in Structural Engineering: Recent Developments*. Edited by F. Cheng and Y. Gu, Elsevier Scientific Ltd. pp. 193-206, 1999.

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<sup>†</sup> Student author

## SCHOLARSHIP / RESEARCH: PUBLICATIONS (*continued*)

### *Papers Currently In Review*

17. LeBeau<sup>†</sup>, K., **Wadia-Fascetti, S.** (submitted for review October 2008) “Predictive and Diagnostic Load Rating Model Applied to a Prestressed Concrete Bridge.” *Journal of Bridge Engineering*, American Society of Civil Engineers.
18. LeBeau<sup>†</sup>, K., **Wadia-Fascetti, S.** (submitted for review February 2009 and revised August 2009) “Diagnostic Bayesian Network Applied to an In Service Bridge Beam.” *Journal of Bridge Engineering*, American Society of Civil Engineering.
19. Belli<sup>†</sup>, K., **Wadia-Fascetti, S.**, Rappaport, C. (submitted for review August 2009) “Integrated Sensor and Media Modeling Environment for Subsurface Sensing and Imaging.” *Journal of Computing in Civil Engineering*, American Society of Civil Engineers.
20. Belli<sup>†</sup>, K., Rappaport, C., **Wadia-Fascetti, S.** (submitted for review August 2009) “A Time Domain Equivalent Source Model of an Impulse GPR Antenna Based on Measured Radiation Fields.” *Research in Nondestructive Evaluation*. Taylor and Francis, Taylor and Francis Group.

### *Refereed (Peer Reviewed) Conference Papers and Abstracts*

1. Ganguli, S. **Wadia-Fascetti, C.** Rappaport. (2009) “Synthetic Aperture Imaging of a Concrete Bridge Deck”. *Asian-Pacific Network of Centers for Research in Smart Structure Technology (ANCRiSST) 5<sup>th</sup> Annual Workshop Proceedings*. Presentation and publication in printed proceedings.
2. K. Belli<sup>†</sup>, C. Rappaport, **S. Wadia-Fascetti.** (2009) “Determination of GPR Antenna Models for 2-D Finite-difference Time Domain Simulation of Bridges”. *Asian-Pacific Network of Centers for Research in Smart Structure Technology (ANCRiSST) 5<sup>th</sup> Annual Workshop Proceedings*. Presentation and publication in printed proceedings.
3. K. Belli<sup>†</sup>, C. Udall<sup>†</sup>, C. Rappaport, **S. Wadia-Fascetti.** (2009) “2-1/2 Dimensional Bi-static GPR Propagation and Scattering Modeling of Roadways and Tunnels with Projected 2D FDTD”. *IEEE Geoscience and Remote Sensing Symposium (IGARSS)*, Paper No. 3137. Presentation with paper published in 2009 Proceedings published on CD.
4. H. Zhan, K. Belli<sup>†</sup>, C. Rappaport, **S. Wadia-Fascetti.** (2008) “Effectiveness of 2D FDTD Ground Penetrating Radar Modeling for Bridge Deck Deterioration Evaluated by 3D FDTD”. *IEEE Geoscience and Remote Sensing Symposium (IGARSS)*, Presentation with abstract (#4141) published in 2008 Proceedings published on CD.

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<sup>†</sup> Student author

## SCHOLARSHIP / RESEARCH: PUBLICATIONS: REVIEWED CONFERENCE (continued)

5. K. Belli<sup>†</sup>, C. Rappaport, **S. Wadia-Fascetti**. (2008) “Characterization of a GPR Antenna for Excitation of a 2D Finite-Difference Time Domain Model of Reinforced Bridge Decks.” *Progress in Electromagnetics Research Symposium (PIERS) Abstracts*, Presentation. Proceedings: <http://piers.mit.edu/piersproceedings/piers2k8Cambridge.php>.
6. H. Zhan, K. Belli<sup>†</sup>, C. Rappaport, **S. Wadia-Fascetti**. (2008) “Validation of 2D FDTD Ground Penetrating Radar Modeling for Bridge Deck Evaluation by 3D FDTD.” *Progress in Electromagnetics Research Symposium (PIERS) Abstracts*, Presentation with abstract. Proceedings: <http://piers.mit.edu/piersproceedings/piers2k8Cambridge.php>.
7. Lebeau<sup>†</sup>, K. and **Wadia-Fascetti, S.** (2006) “A Bi-directional Probabilistic Bridge Load Rating Model.” Paper No. 06-2507. Transportation Research Board 85<sup>th</sup> Annual Meeting, Washington D. C., Paper published on CD and accepted for presentation. About half of 2,800 papers submitted were accepted for presentation. January 22 – 26, 2006.
8. Lebeau<sup>†</sup>, K., **Wadia-Fascetti, S.** (2006) “A Probabilistic Diagnostic Bridge Load Rating Model,” *Second Annual Inter-University Symposium on Infrastructure Management*. Organized by the University of Delaware. Papers published on CD.
9. Wahid, P., Marguiles, S., **Wadia-Fascetti, S.**, Vance, J. (2006) “Academic Leadership Conference – Training and Networking,” 17<sup>th</sup> Annual Conference of WEPAN 2006 Conference. Proceedings published electronically at: <http://www.x-cd.com/wepan06>.
10. Hwang, S. J., Saiidi, M. S., **Wadia-Fascetti, S.**, Browning, J., Lynch, J. P., Tawfiq, K., Tsai, K. C., Song, G., Mo, Y. L. (2006) “Experiments and Simulation of Reinforced Concrete Buildings Subjected to Reversed Cyclic Loading and Shake Table Excitation.” *US-Taiwan Workshop 4ICEE, Taipei, Taiwan, October 2006*. Proceedings published electronically at: <http://conf.ncree.org.tw/Proceedings/i0951012/index.html>.
11. Reisberg, R., Funai<sup>†</sup>, A., Interrante<sup>†</sup>, A., **Wadia-Fascetti, S.**, Maheswaran, B. (2006) “CONNECTIONS Physics Review (CPR) Program.” *American Society for Engineering Education 2006 4<sup>th</sup> International Annual Conference on Engineering Education*. Proceedings published on CD: <http://www.asee.org/conferences/paper-search-form.cfm>.
12. Belli<sup>†</sup>, K., **Wadia-Fascetti, S.**, Rappaport, C. (2006) “Analysis of Simulated Variation in Dielectric Properties of Reinforced Concrete Systems.” *Applications of Advanced Technology in Transportation (AATT)*. Chicago, Illinois, August 13 – 16, 2006. Paper published in proceedings. DOI: 10.1061/40799(213)19.
13. Reisberg, R., **Wadia-Fascetti, S.** (2003) “CONNECTIONS: A Focus on Career Preparation for Women in Engineering.” *Proceedings of the 2003 American Society for Engineering Education Annual Conference & Exposition* Copyright © 2003, American Society for Engineering Education.

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<sup>†</sup> Student author

## SCHOLARSHIP / RESEARCH: PUBLICATIONS: REVIEWED CONFERENCE (continued)

14. Chiu, Arthur N. L., Chiu, Gregory. L. F, and **Wadia-Fascetti, S.** (2002) “The Effects of Complex Topography on Spatial Damage Distribution.” *Proceedings of The Third U.S.-Japan Workshop on Wind Engineering*. Seattle, October 2 – 5, 2002. Printed proceedings edited by Partha P. Sarkar, P. P.
15. **Wadia-Fascetti, S.**, Grivas, D., Belli<sup>†</sup>, K., and Lebeau<sup>†</sup>, K. (2002) “Defect Diagnosis and Impact on Bridge Performance” *First International Conference on Bridge Maintenance, Safety and Management (IABMAS) 2002*, Barcelona, Spain, July 14 – 17, 2002. Printed proceedings edited by Casa, Frangopol, and Nowak.
16. Grivas, D., **Wadia-Fascetti, S.**, Schultz, C. B. (2002) “Subsurface Sensing systems for Civil Infrastructure Assessment” *First International Conference on Bridge Maintenance, Safety and Management (IABMAS) 2002*, Barcelona, Spain, July 14 – 17, 2002. Printed proceedings edited by Casa, Frangopol, and Nowak.
17. Campbell, P., **Wadia-Fascetti, S.**, Perlman, L., Hadley, E. (2002) “Confidence and Continuation: The Northeastern First Year Engineering Student Survey.” 13<sup>th</sup> Annual Conference of WEPAN 2002 Conference, *Engineering for All Women: Exploring Perspectives*, San Juan, Puerto Rico, June 8 - 11, 2002. Proceedings on CD.
18. Mukerji, K., **Wadia-Fascetti, S.** (2002) “A College Course for Women Studying Engineering Taught by Professional Women,” 13<sup>th</sup> Annual Conference of WEPAN 2002 Conference, *Engineering for All Women: Exploring Perspectives*, San Juan, Puerto Rico, June 8 - 11, 2002. Proceedings on CD.
19. **Wadia-Fascetti, S.**, Grivas, D., Schultz, C. B. (2002) “Subsurface Sensing for Highway Infrastructure Condition Diagnostics: Overview of Current Applications and Future Development.” Paper No. 02-3987. Transportation Research Board 81<sup>st</sup> Annual Meeting, Washington D. C., January 13 – 17, 2002. Proceedings on CD.
20. Chiu, Arthur N. L., Chiu, Gregory. L. F, and **Wadia-Fascetti, S.** (2001) “The Investigation of Topographic Effects on Spatial Damage Distribution in Hurricane Iniki,” *Proceedings of the 5<sup>th</sup> Asia-Pacific Conference on Wind Engineering (APCWEV)*, Kyoto, Japan, October 21 – 24, 2001. Printed in proceedings.
21. Chiu, Arthur N. L., Chiu, Gregory. L. F, and **Wadia-Fascetti, S.** (2001) “Consideration of Complex Topography Effects on Design Wind Speeds,” *Proceedings of the 8<sup>th</sup> East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-8), Challenges in the 21<sup>st</sup> Century*, Singapore, December 5 – 7, 2001. Printed in proceedings.
22. LeBeau<sup>†</sup>, K. and **Wadia-Fascetti, S.** (2001) “A Model of Deteriorating Structures” *Computational Fluid and Solid Mechanics*, K. J. Bathe (Editor), *Proceedings of the Conference on Computational Fluid and Solid Mechanics*. Massachusetts Institute of Technology, Cambridge, MA, June 2001. Printed in proceedings.

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<sup>†</sup> Student author

## SCHOLARSHIP / RESEARCH: PUBLICATIONS: REVIEWED CONFERENCE (continued)

23. **Wadia-Fascetti, S.**, Ozgu<sup>†</sup>, S., Sanayei, M. (2000) "Controlling Modeling Error in Structural Parameter Estimation." *Third International Workshop on Structural Control: Designing Civil Engineering Structures by Performance*. Printed Proceedings. Paris, France, July 6 – 8, 2000.
24. **Wadia-Fascetti, S.**, Rivero<sup>†</sup>, F., Sanayei, M. (1999) "An Assessment of Data Quality for Structural Identification." Proceedings of the International Conference on Applications of Statistics and Probability, December 13 – 15, 1999. Sydney, Australia. Paper peer reviewed and accepted for presentation and publication in printed proceedings.
25. LeBeau<sup>†</sup>, K. and **Wadia-Fascetti, S.** (2000) "A Fault Tree Model of Bridge Deterioration." *8<sup>th</sup> American Society of Civil Engineers Specialty Conference on Probabilistic Mechanics and Structural Reliability*. American Society of Civil Engineers, University of Notre Dame, Notre Dame, Indiana. Printed Proceedings also available electronically at:  
[http://www.usc.edu/dept/civil\\_eng/johnsone/pmc2000](http://www.usc.edu/dept/civil_eng/johnsone/pmc2000).
26. **Wadia-Fascetti, S.** and Tarnowski<sup>†</sup>, M. (1998) "Problem Solving and Communication, in the Structural Analysis Laboratory." Session 1275. ASEE Annual Convention. Printed Proceedings. Seattle, WA, July 1998. Proceedings published in print and available electronically at: <http://www.asee.org/conferences/paper-search-form.cfm>.
27. **Wadia-Fascetti, S.**, Gunes<sup>†</sup>, B., Aktan, A. E., Lennett, M., Sanayei, M., Arya<sup>†</sup>, B., Helmicki, A., and Wilson<sup>†</sup>, A. (1998) "Structural Identification: A Tool for Bridge Reliability Evaluation." Paper Number T216-4. World Structures Congress. Printed Proceedings. San Francisco, CA, July 1998.
28. Sanayei, M., **Wadia-Fascetti, S.**, McClain<sup>†</sup>, J. A. S., Gornshteyn<sup>†</sup>, I., Santini<sup>†</sup>, E. M., (1998) "Structural Parameter Estimation Using Modal Responses and Incorporating Boundary Conditions." Paper Number T118-2. World Structures Congress. Printed Proceedings. San Francisco, CA, July 1998.
29. Sanayei, M., Doebling, S. W., Farrar, C. R, **Wadia-Fascetti, S.**, Arya<sup>†</sup>, B. (1998) "Challenges in Parameter Estimation for Condition Assessment of Structures" Paper Number T216-5. World Structures Congress. Printed Proceedings. San Francisco, CA, July 1998.
30. **Wadia-Fascetti, S.**, Sanayei, M., Gunes<sup>†</sup>, B. (1998) "Significance of Modeling Error on Parameter Estimation" *Proceedings of the 12<sup>th</sup> American Society of Civil Engineers Engineering Mechanics Specialty Conference*. Printed Proceedings. San Diego, CA, May 1998. pp. 201-204.
31. **Wadia-Fascetti, S.**, and Gunes<sup>†</sup>, B. V., (1996) "Considering Uncertainty in Earthquake Response Spectra." *American Society of Civil Engineers Specialty Conference: Natural Disaster Reduction*. Printed Proceedings. Washington, DC, Dec. 1996. pp. 211-212.

## SCHOLARSHIP / RESEARCH: PUBLICATIONS: REVIEWED CONFERENCE *(continued)*

32. Chiu, G. C., **Wadia-Fascetti, S.**, Hossein<sup>†</sup>, M. (1996) "Post-Hurricane Investigations: Quantifying Damage." *American Society of Civil Engineers Specialty Conference: Natural Disaster Reduction*. Printed Proceedings. Washington, DC, Dec. 1996. pp. 74-75.
33. **Wadia-Fascetti, S.**, and Smith, H. A., (1995) "Use of Fuzzy Logic in the Quantification of Dynamic Uncertainties Due to Degradation." *Restructuring: America and Beyond Proceedings of Structures Congress XIII*, edited by M. Sanayei. Printed Proceedings. Boston, MA, April 1995. pp. 1655-1658.
34. **Wadia-Fascetti, S.**, Smith, H. A., and Kiremidjian, A. S., (1994) "Quantification of Ground Motion Uncertainties Based on Fuzzy Set Mathematics." *Proceedings of the 5th National Conference on Earthquake Engineering*. Printed Proceedings. Chicago, IL, July 1994.

### **Technical Reports**

Hayashi, Y., Takahashi, I., Mori, M., Togari, Y, Mita, A., Smith, H. A., **Wadia-Fascetti, S.**, (1995) Izumi Research Institute Technical Report No. IRI-95-02, *Joint Research Program on Optimization of Structural Design Considering Life-Span of Buildings*, published by Izumi Research Institute, Shimizu Corporation, Tokyo, Japan, March 1995.

**Wadia-Fascetti, S.** and Smith, H. A., (1994) John A. Blume Earthquake Engineering Center Report No. 113, *Adaptive Dynamic Analysis Considering Structural Lifespan: An Approach Based on Fuzzy Mathematics*. Published by the Department of Civil Engineering, Stanford University, Stanford, CA 94305-4020, August 1994.

## CREATIVE PRODUCTIVITY

*Not applicable for discipline.*

## PRESENTATIONS AND PROCEEDINGS

*Presentations listed are in addition to those listed in refereed publications unless noted.*

### **Invited Presentations: International**

**Wadia-Fascetti, S.** (2004) "Integrated Modeling Environment for Subsurface Sensing." Presented at the workshop titled "Smart Structure Technologies." Seoul, South Korea, September 1 – 5, 2004.

<sup>§</sup>**Wadia-Fascetti, S.** (2000) "Controlling Modeling Error in Geometric Parameter Estimation." To be presented at the workshop titled "Third International Workshop on Structural Control: Designing Civil Engineering Structures by Performance." Paris, France, July 6 – 8, 2000.

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<sup>†</sup> Student author

<sup>§</sup> Coincides with a paper listed under Conference Publications.

## SCHOLARSHIP / RESEARCH: PRESENTATIONS AND PROCEEDINGS

### *Invited Presentations: International (continued)*

**Wadia-Fascetti, S.** (1999) “Structural Health Monitoring: Challenges in Implementation.” Presented at the workshop titled “Nonlinear System Identification and Structural Health Monitoring.” Kyoto, Japan. November 19 - 20, 1999.

**Wadia-Fascetti, S.** (1998) “Practical Issues in the Application of Structural Identification” Presented at the 2<sup>nd</sup> US-China Symposium / Workshop on Recent Developments and Future Trends of Computational Mechanics in Structural Engineering, Dalian, China. May 26, 1998.

### *Invited Presentations: Domestic (excluding conference presentations with published papers)*

**Wadia-Fascetti, S.** (2009) “Programs to Advance Women at Northeastern University.” Presented as part of the IBM New England Women’s Network, November 4, 2008.

**Wadia-Fascetti, S.** (2008) “Intelligent Diagnostics IGERT.” Presented as part of the NSF Center for Subsurface Sensing and Imaging Site Visit, Northeastern University, April, 2008.

**Wadia-Fascetti, S.** (2006) “Habits of Quick Start Professors.” Presented as part of the Path of the Professorship Workshop, Massachusetts Institute of Technology, October 21, 2006.

**Wadia-Fascetti, S.** (2006) “Subsurface Sensing and Imaging of Civil Infrastructure.” Presented as part of the NSF Center for Subsurface Sensing and Imaging Site Visit, Northeastern University, April, 2006.

**Wadia-Fascetti, S.** (2005) “Women in Science and Engineering.” Presented as part of the Department of Biology Fall Seminar Series, Northeastern University, October 24, 2005.

\***Wadia-Fascetti, S.** (2004) Member of panel on Work and Family Issues. *PAESMEM<sup>Y</sup> Stanford School of Engineering Workshop on Mentoring in Engineering.* Stanford, California. June 21 – 22, 2004.

\***Wadia-Fascetti, S.** (2004) “The Best Job in the World: Sustaining Bridges and Making Connections.” Presented at the Graduate Women in Science (GWIS) National Conference, titled "Building Bridges." Northeastern University. Boston, MA. June 10 – 13, 2004.

**Wadia-Fascetti, S.** (2003) "Subsurface Sensing and Imaging for Infrastructure Assessment." *Tufts University Civil Engineering Seminar.* April, 2003.

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\* Also listed under workshop participation

<sup>Y</sup> PAESMEM stands for Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring

## SCHOLARSHIP / RESEARCH: PRESENTATIONS AND PROCEEDINGS

### *Invited Presentations: Domestic (continued)*

Belli, K. (2003) (advised by **Wadia-Fascetti**) " Virtual Testbed Framework for Civil Infrastructure and Geotechnical Applications." *CenSSIS Research and Industrial Collaboration Conference*, November, 2003, Boston, Massachusetts.

**Wadia-Fascetti, S.** (2003) "Inter-generational Mentoring." *Best-Practices in Mentoring Symposium* in conjunction with the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. Washington D. C., March 17, 2003.

**Wadia-Fascetti, S.** (2001) "Incorporating Modeling Error in Structural Identification." *American Control Conference*. Arlington, VA, June, 2001.

**Wadia-Fascetti, S.** (2000) "Towards Successful Structural Condition Assessment." Presented as part of the Department of Civil & Environmental Engineering Spring Seminar Series, University of Rhode Island, April 5, 2000.

**Wadia-Fascetti, S.** (2000) "CONNECTIONS: A Working Partnership for the Next Generation of Women in Science, Technology, Engineering, and Mathematics (STEM)." Presented to the College of Engineering at the University of Rhode Island, April 5, 2000.

**Wadia-Fascetti, S.** (2000) "Towards Successful Structural Condition Assessment." Presented to Department of Civil & Environmental Engineering, Tufts University, March 10, 2000.

**Wadia-Fascetti, S.** (1999) "Data Quality Indices for Structural Condition Assessment." Presented as part of the Fall 1999 Seminar Series for the Department of Civil Engineering at the University of Illinois at Urbana-Champaign, November 8, 1999.

**Wadia-Fascetti, S.** (1998) "Significance of Errors in Structural Identification." Part of the Spring Colloquium Series 1998, Department of Civil and Environmental Engineering at the Massachusetts Institute of Technology, March 12, 1998.

**Wadia-Fascetti, S.** (1998) "Fuzzy Set Math: An Introduction and an Overview of Possible Applications." Part of the seminar series for the Department of Civil and Environmental Engineering at Tufts University, January 30, 1998.

**Wadia-Fascetti, S.** (1999) "Use of Bridge Case-Histories in Prediction Model Development." Presentation to American Society of Civil Engineers Committee on Safety of Bridges, New Orleans, Louisiana, April 18, 1999.

**Wadia-Fascetti, S.** (1996) "Bridge Structural Identification for Condition Assessment." Presentation to American Society of Civil Engineers Special Task Committee on Structural Identification, Chicago, IL, April 13, 1996.

## SCHOLARSHIP / RESEARCH: PRESENTATIONS AND PROCEEDINGS

### *Selected Poster Presentations*

*The Connections Program funded by NSF Grant #HRD-9813896 has been disseminated through a number of venues. Poster sessions related to Connections are listed below:*

- *An Overview of the Connections Program* a poster presentation prepared by K. Mukerji and **S. Wadia-Fascetti**, 13<sup>th</sup> Annual Conference of WEPAN 2002, *Engineering for All Women: Exploring Perspectives*, San Juan, Puerto Rico, June 8 – 11, 2002.
- *Introducing the Connections Program at Northeastern University* a poster presentation prepared by **S. Wadia-Fascetti** and J. Hart and exhibited at the **Women in Engineering Summit** sponsored by the National Academy of Engineering. Washington D. C., May 1999.
- *Connections Program National Science Foundation Workshop for Improving and Assessing the Impact of Programs to Encourage Girls to Pursue Science, Engineering, and Mathematics at Santa Clara University.* White paper by J. Hart and **S. Wadia-Fascetti**. August 1999. <http://www.scu.edu/SCU/Projects/NSFWorkshop99>.
- **Wadia-Fascetti, S.**, Cross<sup>†</sup>, M., Leventman, P. (1998) *Northeastern University E-Mentoring Program*, at the Poster Session titled, “Connections: Making Civil Engineering a Realistic Career Option.” ‘98 American Society of Civil Engineers National Convention, Oct. 1998, Boston, MA.

*Poster sessions have been presented regularly at grantee meetings:*

- *Fusion of Electromagnetic and Mechanical Wave Data for Concrete Structure Diagnostics* prepared by A. Ganguli, Wadia-Fascetti, et al., Civil Mechanical and Manufacturing Innovation (CMMI) National Science Foundation annual grantee meeting. June 2009, Honolulu, HI.
- *Bridge Deck Assessment through Sensing and Identification with Mechanical Waves* prepared by IGERT Fellow David Abramo (advised by Wadia-Fascetti) for the National Science Foundation Integrated Graduate Education and Research Traineeship (IGERT) Program 2009 Principal Investigator meeting, Alexandria, Virginia, May 17 – 19, 2009.
- *Connections Program Activities: 2000 – 2001*, Presented at the National Science Foundation Program for Gender Equity PI Meeting, October 1999, 2000, & 2001.
- *Predicting Bridge Life-Cycle Deterioration by Integrating Condition States with System Performance*, prepared by K. LeBeau<sup>†</sup> and Wadia-Fascetti for the National Science Foundation CAREER Program Principal Investigator Meeting. January 1999, Washington, D. C.

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<sup>†</sup> Student author

## SCHOLARSHIP / RESEARCH: PRESENTATIONS AND PROCEEDINGS (continued)

### *International Workshop Participation*

- 2009        **Secretariat**, “Fifth International Workshop on Advanced Smart Materials and Smart Structures Technology.” Boston, Massachusetts, U.S.A. July 29 – 31, 2009. Sponsored by ANCRiSST, the Asian-Pacific Network of Centers for Research in Smart Structure Technology.
- 2004        **Invited Participant**, “U.S. - Korea Joint Seminar / Workshop on Smart Structures Technologies.” Seoul, Korea, September 1 – 4, 2004. Twelve participants from the United States attended this meeting.
- 2000        **Invited Participant**, “Third International Workshop on Structural Control: Designing Civil Engineering Structures by Performance.” Paris, France. July 6 – 8, 2000
- 1999        **Invited Participant**, Workshop on “Nonlinear System Identification and Structural Health Monitoring.” Kyoto University, Kyoto, Japan. November 19 – 20, 1999. Six participants from the United States attended this meeting.
- 1998        **Invited Delegate**, 2<sup>nd</sup> US-China Joint Symposium/Workshop on "Recent Developments and Future Trends of Computational Mechanics in Structural Engineering" May 25-28, 1998, Dalian, China. Eleven U.S. delegates attended this meeting.
- 1997        **Participant**, The Second U. S. - Japan Workshop on Cooperative Research for Mitigation of Urban Earthquake Disasters: Learning from Kobe and Northridge, Sponsored by the Ministry of Education of Japan and U. S. National Science Foundation. Tokyo, Japan, February 27 - March 1, 1997. Attended as part of the U. S. / Japan travel fellowship program.

### *National Workshop Participation*

- 2008 - 2009    **Grantee Participant**, National Science Foundation Integrated Graduate Education and Research Trainee (IGERT) Program, annual meeting.
- 2008        **Invited Participant**, National Science Foundation IGERT Institutional Meeting, National Science Foundation IGERT Program, Arlington, Virginia, May 20 – 21, 2008.
- 2008 - 2009    **Grantee Participant**, National Science Foundation NSF ADVANCE Program Annual Grantee Meeting, annual meeting.
- 2006        **Invited Participant**, Resilient & Sustainable Infrastructures Workshop, Arlington, Virginia, National Science Foundation, December 4-5, 2006.
- 2005        **Organizer**, Women’s Engineering Leadership Institute Leadership Conference, Cocoa Beach, Florida, April 28-May 1, 2005.
- 2004        **Invited Speaker**, Stanford University PAESMEM Stanford School of Engineering Workshop on *Mentoring in Engineering Workshop*, June 2004.

## **SCHOLARSHIP / RESEARCH: PRESENTATIONS AND PROCEEDINGS**

### ***National Workshop Participation (continued)***

- 2004           **Invited Speaker**, National Graduate Women in Science Conference, Northeastern University, Boston, MA, June 2004.
- 2003 - 2004   **Participant**, National Earthquake Engineering Simulation Annual Meetings.
- 2003           **Participant**, Fast Hybrid Testing Workshop, National Earthquake Engineering Simulation, Boulder, Colorado, October 9 – 10, 2003.
- 2003, 2009   **Grantee Participant**, Division of Human Resource Development Joint Annual Meetings, National Science Foundation.
- 2003           **Honored Participant**, “Presidential Awards for Excellence in Science Mathematics and Engineering Mentoring.” Washington DC, March 17 – 18, 2003.
- 1999 - 2001   **Grantee Participant**, National Science Foundation Program for Gender Equity Annual Grantee Meeting, October 1999 & October 2000
- 1999           **Invited Participant**, National Science Foundation CAREER Program P. I. Meeting. January 10-12, 1999, Washington, D C. Less than 20% of the Career Grantees from the Civil and Mechanical Systems Division were invited to this meeting
- 1998           **Invited Participant**, Collaboration Forum sponsored and co-organized by the National Science Foundation and the Civil Engineering Research Foundation (CERF) of the American Society of Civil Engineers (ASCE). November 10, 1998, Washington, DC
- 1998           **Invited Participant**, National Science Foundation Civil and Mechanical Systems Workshop on the Integration of Engineering Research and Education. November 9 - 10, 1998, Arlington, VA
- 1996           **Participant**, Workshop on Structural Reliability in Bridge Engineering, October, 2-4, 1996, University of Colorado at Boulder
- 1995           **Participant**, North American Workshop on Instrumentation and Vibration Analysis of Highway Bridges for Condition Assessment and Damage Detection, July 18-20, 1995; University of Cincinnati

## **SCHOLARSHIP / RESEARCH** (continued)

### **PROPOSALS AND GRANT FUNDING**

*Played a significant role in securing \$18 million in externally funded grants. Served as PI for more than \$9 million in external funding and currently serves as the Deputy Director and Co-PI on an additional \$9 million grant from the National Institute for Standards and Technology (NIST) Technology Innovation Program, short titled "VOTERS" for Civil Infrastructure Assessment. These grants have funded both technical endeavors and institutional program development.*

**Current Externally Funded Research Projects (active):** *Current funded research projects build on a foundation of research related to the use of data from nondestructive technologies for condition assessment, and when appropriate, model calibration. Current funded research projects address barriers related to pavement and bridge assessment with a particular focus on subsurface sensing technologies. These projects all seek to advance technologies and analytic methods to advance inspection practice for the improvement of damage (or deterioration) detection and condition assessment of infrastructure systems.*

#### **1. VOTERS: Versatile Onboard Traffic Embedded Roaming Sensors**

PI: Ming L. Wang (Director)  
Co-PIs: **Sara Wadia-Fascetti** (Deputy Director), Carey Rappaport  
Sponsor: National Institute of Standards & Technology  
Duration: March 1, 2009 – February 27, 2014  
Amount: \$9,000,000 funding from NIST with additional \$9,800,000 in cost share. VOTERS engages four Northeastern faculty, two faculty at partnering institutions, three research associates, and more than 12 Northeastern students annually. In total VOTERS engages about 40 faculty, researchers, and graduate students. S. Wadia-Fascetti supervises 2 VOTERS students directly and co-advises at least 1 additional student.

#### **2. IGERT: Intelligent Diagnostics for Aging Civil Infrastructure** (<http://www.igert-id.neu.edu>)

PI: **Sara Wadia-Fascetti** (Northeastern is lead institution)  
Sponsor: National Science Foundation  
CoPIs: Bernal (CEE), Rappaport (ECE), Bluestone (Sociology, School of Social Sciences), Padilla (CEE – University of Puerto Rico at Mayaguez)  
Duration: September 1, 2007 – August 31, 2012  
Amount: \$3,000,000 (total) to support 27 different doctoral students on 2 year fellowships. To date 10 Northeastern faculty and 5 University of Puerto Rico faculty have been involved with IGERT activities. S. Wadia-Fascetti supervises 2 of the 6 Fellows as of August 2009.

#### **3. Collaborative Research: Fusion of Electromagnetic and Mechanical Wave Data for Concrete Structure Diagnostics**

PI: **Sara Wadia-Fascetti** (Northeastern is lead institution)  
Sponsor: National Science Foundation  
CoPIs: Rappaport (ECE), Miller (ECE-Tufts), Popovics (CEE-Illinois Urbana...)  
Duration: August 1, 2006 – July 31, 2010  
Amount: \$360,000 (total) with \$316,399 to Northeastern & \$43,601 to Illinois

## SCHOLARSHIP / RESEARCH: PROPOSALS AND GRANT FUNDING (*continued*)

### 4. *Model-Based Quantitative Assessment of Reinforced Concrete Structures (Internal funds)*

PI: **Sara Wadia-Fascetti**  
Sponsor: Center for Subsurface Sensing and Imaging (CenSSIS) – An NSF ERC  
Duration: July 2003– June 2010  
Amount: \$44,000 / year totaling \$300,000

#### 4a. *Ground Penetrating Radar Curricula Development*

PI: **Sara Wadia-Fascetti**  
Sponsor: Geophysical Survey Systems Inc.  
Duration: January 2006 – June 2008  
Amount: \$10,000

*Current Externally Funded Programmatic Development Projects (active): Continuous efforts to provide systemic improvements to the institutional environment have resulted in several funded grants. ADVANCE reports to the Office of the Provost and is an institutional transformation project to ADVANCE women faculty in science, engineering, and social science fields. The “Pathways to Self-Efficacy...” project continues work initiated by CONNECTIONS, which was funded in 1999 and seeks to identify strategies to improve the educational climate for women in engineering.*

### 5. *ADVANCE Institutional Transformation: Advancing Women in Interdisciplinary and International Networks (AWIIN) (<http://www.neu.edu/advance>)*

PI: **Sara Wadia-Fascetti**  
Sponsor: National Science Foundation  
CoPIs: Zippel (Sociology), Falcon (Provost Office / Sociology), Jones (Chemistry), Isaacs (Mechanical & Industrial Engineering)  
Duration: September 1, 2008 – August 31, 2013  
Amount: \$3,687,222 (total). Funds support programs to promote institutional transformation as well as a program manager, post doctoral research associate, and two graduate students each year.

### 6. *Pathways to Self-Efficacy and Retention of Women in Undergraduate Engineering (<http://www.coe.neu.edu/pathways>)*

PI: Rachelle Reisberg (Northeastern)  
Sponsor: National Science Foundation  
CoPIs: Raelin (Northeastern), Bailey (Rochester Institute of Technology), Burger (Virginia Institute of Technology), Whitman (University of Wyoming)  
Senior Role **Wadia-Fascetti** (Northeastern)  
Duration: October 1, 2008 – September 30, 2011  
Amount: \$499,990 (total). Funds support research efforts at the four partnering institutions.

## **SCHOLARSHIP / RESEARCH: PROPOSALS AND GRANT FUNDING** *(continued)*

### ***Pending Proposals for External Funding***

#### **7. IDR: Neuronal Concrete for Bridge Deck Sustainability Through Self-Diagnosis**

PI: **Sara Wadia-Fascetti**  
Sponsor: National Science Foundation  
CoPIs: Basagni (ECE), Rappaport (ECE)  
Duration: January 1, 2010 – December 31, 2013  
Amount: \$595,907 (total requested)

### ***Completed Projects from External Funding: Technical & Programmatic Development***

*Projects represent a balance of technical research projects and program development projects.*

#### **8. GAANN Fellowship Program: Interdisciplinary Graduate Program in Sensing, Diagnostics, and Rehabilitation of Structural Systems**

PI: **Sara Wadia-Fascetti**  
Sponsor: Department of Education, Graduate Assistantships in Areas of National Need  
CoPIs: Bernal (CEE); Sasani (CEE); Adams (MIE); Shafai (ECE); Rappaport (ECE)  
Duration: September 1, 2004 – August 15, 2009  
Amount: \$500,000

#### **9. NSF SBIR Phase I: Electrical Impedance Spectroscopic Sensor to Detect Objects in Soil**

PI: Ron Gamache (TransTech Systems)  
Sponsor: National Science Foundation  
Northeastern: **Wadia – Fascetti (PI)**, Rappaport (Co-PI, ECE)  
Tufts: Miller (Co-PI)  
Duration: January 1, 2008 – August 31, 2008  
Amount: \$100,000; \$23,000 to Northeastern

#### **10. Presidential Award for Excellence in Science, Engineering, and Mathematics Mentoring**

PI: **Sara Wadia-Fascetti**  
Sponsor: National Science Foundation (Award # HRD- 0227872)  
Program Director: Marilyn Suiter  
Duration: April 1, 2003 - March 31, 2005  
Amount: \$10,000

#### **11. A CAREER Development Award: Predicting Bridge Life-Cycle Deterioration By Integrating Condition States with System Performance**

PI: **Sara Wadia-Fascetti**  
Sponsor: National Science Foundation (Award # CMS-9702656)  
Program Director: Dr. Ken Chong (awarded), Dr. Vijay Gopu, Dr. Steve McCabe  
Duration: July 1, 1997 - June 30, 2004 (with extensions)  
Amount: \$334,000 (amount requested: \$200,000 base + \$15,000 REU support + \$110,000 matching from NSF + \$9,000 for international collaboration)

**SCHOLARSHIP / RESEARCH: PROPOSALS AND GRANT FUNDING** (*continued*)

**12. CONNECTIONS: Women in Science, Engineering, and Math (SEM): Making Connections Between Career, Curriculum, and Personal Development**

PI: **Sara Wadia-Fascetti**  
Sponsor: National Science Foundation (Award # HRD-9813896)  
Program Director: Dr. Ruta Sevo; Dr. Margrete Klein (past)  
Co-PIs: E. Duwart, P. Gilmore, L. Watkins (Girl Scouts), P. Leventman  
Duration: January 1, 1999 - June 30, 2004 (with extension)  
Amount: \$899,523 (amount requested: \$899,523)

**Additional grants to support CONNECTIONS activities**

**12a. Adobe Software Donation to Connections**

PI: **Sara Wadia-Fascetti**, Connections  
Sponsor: Adobe Systems Inc.  
Date: September 2000  
Amount: Equivalent to \$72,267 in software licenses

**12b. Equipment Request for the HP Connections Computer Laboratory**

Director: **Sara Wadia-Fascetti** (Co-Director, Dr. Jo-Anne Hart)  
Sponsor: Hewlett-Packard, February 2000  
Amount: \$15,300 in computer equipment (approx.)

**13. Bridge Structural Identification for Condition Assessment**

PI: **Sara Wadia-Fascetti** (Collaborators: Sanayei (Tufts); Aktan (Drexel); Helmicki (U. of Cincinnati).  
Sponsor: National Science Foundation (Award # CMS-9622515)  
Program Director: Dr. Shih-Chi Liu;  
Duration: September 1, 1996 - August 31, 1999 (with 1-yr extension until August 31, 2000)  
Amount: \$101,496 + \$5,000 REU support (total support: \$429,598 at all partners)

**14. Partial Support for Panel Workshop: Making Civil Engineering a Realistic Career Option**

PI: **Sara Wadia-Fascetti**  
Sponsor: National Science Foundation (Award # CMS-9817619)  
Program Director: Dr. Priscilla Nelson (awarded), Dr. Clifford Astill  
Duration: August 1, 1998 – August 31, 2000  
Amount: \$8,366 (amount requested \$8,366)

**15. Application for Travel Fellowship: Advanced Analytical and Experimental Methods for Condition Assessment and Hazard Mitigation**

Applicant: **Sara Wadia-Fascetti**  
Sponsor: Japan Society for the Promotion of Science via the United States' NSF  
Duration: February 22, 1997 - March 10, 1997  
Amount: The award covered airfare and travel stipend

## SCHOLARSHIP / RESEARCH: PROPOSALS AND GRANT FUNDING (continued)

### Unsuccessful Proposals for External Grant Funding

Many of the successful proposals listed previously have been the result of revisions and resubmissions. S. Wadia-Fascetti has been involved with the development of a number of large proposals that have not yet secured funding. A selection of these proposals along with their status is listed below.

Table: Representative Example of Declined Proposals from the National Science Foundation.

Declined Proposal Title	SWF Role	Date	Amount
<b>NEESR-GC: Reliable State-of-the-Art Technologies to Advance Seismic Protection in Bridge Engineering</b>	Co-PI	March 2008	\$3.6 M
PI: Bruneau at SUNY Buffalo w/ collaborators from around the country. Submitted twice and invited back to reverse panel. SWF participated in the reverse panel review at NSF.			Declined. Not yet funded.
<b>2009 NSF Civil, Mechanical and Manufacturing Innovation Grantees and Research Conference: Urban Sustainability; August 3-6, 2009; Boston, Massachusetts</b>	PI	Aug. 2007	\$100 K
with Yener. Invited to submit a proposal to host the 2009 Grantee Meeting for the Civil, Mechanical, and Manufacturing Innovations Division at NSF.			Declined. Asked to submit for 2013.
<b>IT-INC: Information Technology Instruction for Next-generation Careers</b>	Co-PI	Feb. 2006	\$1.2 M
PI: Zied and other co-Pis. Funded in later submission with different team.			Declined.
<b>NEESR-SG: Experiments and Simulation of RC Buildings Under Reversed Cyclic Loading and Shake Table Excitation</b>	Co-PI	Jan. 2006	\$1.6 M
PI: Mo at Univ. of Houston w/ collaborators from around the country.			Declined.
<b>NEESR-SG: Simulation of Progressive Collapse of Reinforced Concrete Frame Structures</b>	Co-PI	Jan. 2004	\$2.4 M
PI: Bracci at Texas A&M w/ collaborators from around the country			Declined.
<b>Self-learning electrochromic glass windows for energy conservation and comfort in housing</b>	PI	April 2005	\$400 K
with Zied, Kamarthi, Levendis (at NU)			Declined.
<b>PFI: Remote Underground Sensing for Commercial Applications</b>	Co-PI	May 2004	\$600 K
PI: Rappaport w/ Alshawabkeh & Soyster at NU and Fratta at Louisiana Tech			Declined.
<b>TRAILBLAZING: Advancing "Valuing Gender Diversity" in engineering educational environments at the student, faculty and leadership levels.</b>	PI	April 2003	\$700 K
with Reisberg at NU. Seeking support through foundations.			Declined.
<b>Structural Identification for Performance Based Design and Rehabilitation of Bridges</b>	PI	Oct. 2002	\$275 K
with Sanayei at Tufts			Declined.
<b>Collaborative Research: ADVANCE Institutional Transformation</b>	Co-PI	May 2001	\$3 M
with Universities around the country. Funded in later submission with different team.			Declined.

**SCHOLARSHIP / RESEARCH: PROPOSALS AND GRANT FUNDING** *(continued)*

***Funding from Internal Grants***

**17. *Bridging Creativity and Integrated Thinking into the Structural Engineering Curriculum***

PI: **Sara Wadia-Fascetti**  
Sponsor: Northeastern University Instructional Development Fund  
Duration: June 1, 1996 - June 30, 1997  
Amount: \$5,000 (amount requested \$5,000)

**18. *Uncertainty Models for Interstory Drift: Methods Based on Fuzzy and Random Variables***

PI: **Sara Wadia-Fascetti**  
Sponsor: Northeastern University Research & Scholarship Development Fund  
Duration: July 1, 1995 - December 31, 1996  
Amount: \$9,100 (amount requested \$10,000)

## TEACHING AND ADVISING

### COURSES TAUGHT

*Northeastern made the transition from the quarter system (4QH) to semester system (4SH) in Fall 2003. All courses listed are part of the regular teaching load and were not considered to be an overload or a course for extra compensation. S. Wadia-Fascetti has taught more than 700 students in a classroom setting. Note that since 2005 teaching has been reduced to 50% of the standard teaching load due to administrative appointment.*

#### **1994 - present Northeastern University, Dept. of Civil and Environmental Engineering**

- Advanced Structural Analysis (CIV G331; CIV 3536, graduate)
  - Typically 6 – 12 students
  - Taught: Fall 2003 and Fall quarters 2000, 1996, 1995, 1994
- Structural Dynamics (CIV 3503, graduate)
  - 10 students
  - Taught: Winter quarter 2003.
- Structural Analysis I (CIV U320 & CIV 1220, undergraduate)
  - Typically 30 – 40 students
  - Taught 6 times since between 1999 and 2000. Taught 6 times between 1994 and 1999.
- Structural Analysis II (CIV U522 & CIV 1222, undergraduate)
  - Typically 10 – 30 students
  - Taught 6 times between 1999 and 2000. Taught 5 times between 1994 and 1999.
- Steel Design I (CIV 1510, undergraduate)
  - Typically 30 students
  - Taught 3 times on the quarter system.

#### **2001 – 2002 Tufts University, Dept. of Civil and Environmental Engineering**

- Earthquake Engineering (EN-24, freshman, about 30 students)

#### **2008 – present IGERT Related Curriculum Development:**

A number of courses will be adapted or added by IGERT faculty for the Intelligent Diagnostics IGERT program. These courses will be interdisciplinary across engineering departments and with the Political Science department.

## TEACHING AND ADVISING (continued)

### RESEARCH SUPERVISION

*S. Wadia-Fascetti is the primary supervisor for all students listed unless otherwise noted. Seventeen distinct students (for a total of 36 student years) supervised by S. Wadia-Fascetti have been supported using the previously listed grant funds. Additionally, the doctoral fellowship programs and the ADVANCE and CONNECTIONS projects have supported to date an additional 10 students not supervised by S. Wadia-Fascetti. The VOTERS team includes about 40 faculty, research scientists, administrative staffs, graduate students from three universities as well as research engineers from two industrial joint venture partners. VOTERS engages 6 Northeastern faculty and 12 students annually.*

#### **Doctoral Research: Continuing Work** (topics will be further defined as work progresses)

§David Abramo. MS / PhD. Mechanical Wave Diagnostic Techniques. 2007 GAANN Fellow, 2008 – 2010 IGERT Fellow.

§Christopher (Kit) Wright. MS / PhD. Ground Penetrating Radar Assessment of Infrastructure. 2008 – 2010 IGERT Fellow.

§Adnan Jamil. PhD. Rapid Diagnostics using Ground Penetrating Radar for Pavement Assessment. 2009 – 2010 IGERT Fellow. Co-advising with Rappaport as advisor.

§Irina Fedorova. MS / PhD. System – Level Assessment of Subsurface Measurements.

§Vitaliy Saykin. MS / PhD. Subsurface Sensing TestBED Characterization.

#### **Doctoral Research: Completed PhD Dissertations**

§ *A Bi-Directional Load Rating Model of the Flexural Response of a Prestressed Concrete Bridge Beam Element.* A PhD Dissertation by Keary LeBeau, August 2008. Currently working as an independent consultant.

§ *Ground Penetrating Radar Bridge Deck Investigations Using Computational Modeling.* An Interdisciplinary PhD Dissertation by Kimberly Belli, April 2008. Currently working as a Postdoctoral Research Assistant at Northeastern University.

#### **PostDoctoral / Research Scientist Supervision**

Dr. Abhijit Ganguli. Research on subsurface sensing and modeling using mechanical waves. Supervision beginning November 2008.

Dr. Kimberley Belli. Research and programmatic support to Intelligent Diagnostics IGERT. Supervision beginning May 2008.

Dr. He (Sophia) Zhan. Research on Born model inverse solution technique for data fusion. Supervision from October 2006 to July 2008. Currently working at The Mathworks, Natick, MA.

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§ Student graduate education is completely supported by external grants.

## TEACHING AND ADVISING: RESEARCH SUPERVISION (*continued*)

### **Masters Research: Ongoing MS Theses**

§ *Ground Penetrating Radar Training Materials*. A MS Thesis by Bryan Lavigne.

### **Masters Research: Completed MS Theses**

§ *Investigations In Model Updating in the Presence of Modeling Uncertainty and Measurement Error*. A Masters Thesis by Alex Bonnar. (Completed April 2004).

§ *A Case Study in the Cost and Benefits of Semi-Active Control with Magnetorheologic Dampers*. A Masters Thesis by Timmothy J. Lannen. (Completed September 2002).

§ *Improving the Investigation of Bridge Deck Condition: From Ground Penetrating Radar to a Proposed Defect Assessment Tool*. A Masters Thesis by Kim Belli. (Completed August 2002).

§ *Refined Modeling of Structural Connections Using Superelements*. A Masters Thesis by Steve Capasso. (Completed May 2001).

§ *An interactive Seismic Engineering Curriculum for Secondary School as Part of the Connections Program*. A Masters Thesis by Susie Siden. (Completed May 2001).

§ *Improving Structural Parameter Estimation Results Considering Modeling Error*. A Masters Thesis by Saygin Ozgu (completed May 2000).

*Condition Assessment of Hurricane Damaged Houses: A Proposed Framework and Method for Calibration*. A Masters Thesis by Musaddeque Hossein (completed June 1998).

*Ground Motion Uncertainty Models: A Comparative Study*. A Masters Thesis by Burcu V. Gunes (completed August 1996).

### **Masters Research: Completed MS Report supported by Wadia-Fascetti who served as reader.**

‡ *Short Fall: An Educational Game on Environmental Issues in Supply Chain Management*. A Masters Thesis by Jessica Corriere. Advised by Prof. J. Isaacs. Supported partially through Connections grant with S. Wadia-Fascetti as the thesis reader (Completed June 2003).

§ *Visualization of Geotechnical and Environmental Engineering Concepts for Secondary School Implementation*. A Masters Thesis by Dawn Dzekevich. Advised by Prof. D. Langseth. Supported entirely through Connections grant with S. Wadia-Fascetti as the thesis reader (Completed May 2001).

### **Masters Research: Completed MS Reports**

‡ *Literature Review of Impact Echo Advancements*. A Masters Report by Sogol Baniahm (Completed Fall 2007).

§ *Nondestructive Testing to Detect Concrete Delamination*. A Masters Report by Linnea Linton (Completed Spring 2003).

‡ *A Quality Measure for Data used in Structural Identification*. A Masters Report by Francisco Rivero (Completed March 2000).

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‡ Student graduate education is partially supported by S. Wadia-Fascetti.

## **TEACHING AND ADVISING: RESEARCH SUPERVISION** *(continued)*

*Interpretation of a Bridge Life-Cycle Based on Inspection Reports and Maintenance History.* A Masters Report by John Watters (Completed August 1998).

*Seismic Vulnerability of Older Highway Bridges in the East.* A Masters Report by Jun Qun (Completed May 1997).

*Effect of Aging and Deterioration on the Load Carrying Capacity of Highway Bridges.* A Masters Report by Ivanna Almanzar (Completed May 1996).

*Investigation of a Semi-Rigid Bolted Connection.* A Masters Report by Kai-Ming Hsieh (Completed May 1996).

*Effects of Hysteresis Models on Dissipated Energy.* A Masters Report by Rosa Castro-Krawiec (Completed August 1995).

### ***Undergraduate Student Research Supervision***

*Supervised 20 undergraduate students in independent study and senior honor's thesis projects. Project topics include web-based tutorials, bridge maintenance case histories, writing matlab-based structural analysis programs, data analysis, and parameter estimation.*

*The following undergraduate students have participated in research projects including those supported by the National Science Foundation Research Experiences for Undergraduates (REU) program. All graduates have continued education in graduate school.*

- **Laura Carey** (NU BS '10) Summer – Fall 2006 CenSSIS REU participant.
- **Andrea Narino** (NU BS '10) Spring 2006 CenSSIS/LSAMP/REU participant.
- **Evan Sabagol** (NU BS '09) Summer 2005 CenSSIS/LSAMP/REU participant.
- **Brian Pailes** (NU BS '07) Pursuing a MS in Structural Engineering with research assistantship at the University of Virginia.
- **Elizabeth Schroth-Nicho** (NU BS '07) Pursuing a MS in Structural Engineering with research assistantship at the University of California, San Diego.
- **Lev Pinelis** (Carnegie Mellon BS '04) Summer 2002 REU participant. Continued to MIT for graduate school.
- **Rick Unruh** (NU BS '03) MIT MEng Civil Engineering Expected Spring 2004. Continued to MIT for graduate school.
- **Josh Crawford** (NU BS '01) Northeastern University towards an MS in Structural Engineering as of Fall 2001 supported by a research assistantship.
- **Miriam Paschetto** (NU BS '98) Univ. of Illinois Urbana-Champaign towards a MS in Structural Engineering. Supported by an NSF Graduate Fellowship as of Fall 1998. Employed by Geiger Engineers in New York.
- **Jason Oliveira** (NU BS '99) Boston Architecture Center for Masters of Architecture in 1999.
- **Harry F. Rhodes** (NU BS '98) Northeastern University for an MS in Structural Engineering as of Fall 1999.

### ***Academic Advising Activities***

- Academic advisor to Structures Masters of Science Structural Engineering graduate students.

## SERVICE AND PROFESSIONAL DEVELOPMENT

*Significant service assignments and activities are listed. Service to the institution is listed first followed by service to the profession and professional development activities.*

### SERVICE TO THE INSTITUTION

#### ***Department – Level Service Activities (CEE: Civil & Environmental Engineering Department)***

2008 – 2009	<b>Elected Member &amp; Chair</b> , CEE Chair Search Committee
2009, '06, '03	<b>Elected Chair</b> , Tenure Committee
2008 – present	<b>Graduate Programs Director</b> , Civil & Environmental Engineering.
2008	<b>Elected Secretary</b> , Tenure Committee
2006 – 2007	<b>Chair</b> , faculty search committee (filled by Prof. Ming Wang)
2005 – 2006	<b>Member</b> , faculty search committee (unfilled)
2003 – 2004	<b>Member</b> , faculty search committee (filled by Prof. Luca Caracoglia)
2002 – present	<b>Graduate Admissions Officer</b> , structures area.
2002 – '04, '06	<b>Member</b> , CEE PhD Committee
2001 – 2002	<b>Elected Member</b> , Chair Search Committee (filled by Prof. Peter Furth)
2001, 2004	<b>Elected Member</b> , Merit Review Committee
2000 - 2001	<b>Member</b> , faculty search committee (filled by Prof. Mehrdad Sasani)
1995 - 2002	<b>Member</b> , undergraduate curriculum committee
1994 - 2000	<b>Participant in Freshman Recruiting</b> , includes speaking at college open houses to prospective students

#### ***College – Level Service Activities***

2005 – 2006	<b>Member, College of Engineering Executive Committee</b> as Founding Director of the Institute for Gender Equity in Leadership, Northeastern University. Partial appointment to Engineering Dean's staff; serve on Dean's Executive to promote faculty development.
2005	<b>Organizer</b> , "Faculty Recruitment Workshop" for Engineering, Sept. '05.
2000	<b>Participant</b> College of Engineering Minority Director interviews
2000 – 2001	<b>Member</b> Northeastern University Scholarship Task Force
1999 – 2004	<b>Faculty Advisor</b> to students participating in Connections (an NSF funded program for the enhancement of women in engineering, science, and mathematics)
1995 - 1998	<b>Faculty Advisor</b> to Northeastern University Student Chapter, Society of Women Engineers

## **SERVICE AND PROFESSIONAL DEVELOPMENT: SERVICE TO INSTITUTION**

### ***College – Level Service Activities (continued)***

- 1995 - 1998      **Member** (Chair, March 97 – August 1998), College of Engineering Computer Advisory Committee
- 1995 – 1997, ‘99   **Advisor** to freshman engineering students through participation in the general engineering course, GE 1001
- 1995              **Faculty representative** for the Civil Engineering Department for the College of Engineering Task Force on “Automated Systems in Engineering Education”
- 1994 - 2000      **Participant in Freshman Recruiting**, includes speaking at college open houses to prospective students as part of the Women in Engineering (WIE) Program.

### ***University – Level Service Activities***

- 2007 – 2008      **Member** Northeastern University Standard 4 Committee for NEASC accreditation
- 2006 – 2007      **Coordinator** Northeastern University Academic Planning Initiative, Fundamental and Translational Research Subcommittee
- 2005 – 2008      **Member** Northeastern University Presidential Fellowship Selection Committee, served in 2000 and 2001 as well.
- 2005              **Member** Northeastern University Instructional Development Fund Selection Committee.
- 2005 – 2008      **Organizer & Sponsor**, Series of workshops in role of Associate Vice – Provost to prepare faculty for tenure and promotion, proposal development, and to make connections to vital aspects of the institution.
- 2005 – 2009      **Organizer & Sponsor**, Series of workshops in role of Associate Vice – Provost and later as Director of ADVANCE to help faculty prepare successful National Science Foundation CAREER Development proposals. Workshops organized with the Office Research Development.
- 2004              **Provost Appointed Member** of the administration evaluation committee for School of Engineering Technology, Director Walter Buchanan.

### ***Northeastern Education – Related Service***

- 2000 – present    **Member**, Educational Advisory Committee to the Northeastern University CenSSIS Engineering Research Center
- 2000              **Attended**, College of Engineering Student Leadership Retreat

## SERVICE AND PROFESSIONAL DEVELOPMENT: SERVICE TO INSTITUTION

### *Northeastern Education – Related Service (continued)*

- 1996 – 2003      **Developer and Coordinator**, electronic mentoring (E-Mentor) program. The E-Mentor program connects professional women, college students, and pre-college students on the Internet. The program is now available to all women in the College of Engineering through the Connections program with an extension to students in the College of Arts and Sciences in Fall 1999
- 2000              **Presentation**, Northeastern University EdTech Brown Bag Seminar Series, December 2000.
- 1996, 1997,      **Laboratory Curriculum Upgrade**, Structural Design and Analysis Laboratory.
- 1999              Redesigned laboratory curricula and experiment modules with Michael Tarnowski (NU Ph.D. candidate and Laboratory Instructor)

## PROFESSIONAL SERVICE ACTIVITIES

### *Professional Activities*

- 2004 – present    **Member Editorial Board**, American Society of Civil Engineers *Journal of Infrastructure Systems*. Current activity includes proposal and organization of a Special Issue related to Sensing Technologies for Improved Bridge Management.
- 2010              **External reviewer and examiner**, Ph.D. in Construction, Engineering and Infrastructure Management, School of Engineering and Technology. Asian Institute of Technology, Pathumthani, Thailand. See: <http://www.set.ait.ac.th>.
- 2007 – 2009      **Member** (Chair in 2009), Sharon Keillor Award Selection Committee, American Society of Engineering Education.
- 2004              **Organizer**, “Leadership Development Conference,” sponsored by Women’s Engineering Leadership Institute and the National Science Foundation. April 28 – May 1, 2005, Cocoa Beach, Florida
- 2002 – 2006      **Invited Member**, Boston Advisory Council to the Carnegie Institute of Technology, Carnegie Mellon University, Pittsburgh, PA
- 1999 – 2003      **Invited Member**, of the Dean's Leadership Council for the Carnegie Institute of Technology, Carnegie Mellon University, Pittsburgh, PA
- 1998 – 2000      **Elected Member**, Boston Society of Civil Engineers Nominating Committee
- 1996 - 1998      **Member**, of the Local Organizing Committee for the ASCE 1998 National Convention held in Boston, MA October 18 - 22 1998. Responsible for the Student Program

## **SERVICE AND PROFESSIONAL DEVELOPMENT: PROFESSIONAL SERVICE** *(continued)*

### ***Technical Committee Membership***

- 1997 – 2005      **Member** ASCE Technical Committee on Safety of Bridges
- 1996 – 2004      **Member and Secretary ('96 – '00)** ASCE Technical Committee on Structural Identification and Health Monitoring of Constructed Facilities (control member)
- 1996              **Member** ASCE Task Committee on Structural Identification of Constructed Facilities

### ***Conference Session Organization***

- 2009              **Session Chair** “Subsurface Sensing Technologies,” The Fifth International Workshop on Advanced Smart Materials and Smart Structures Technology, Boston, MA, July 29 – August 1, 2009.
- 2001              **Session Chair** “Bridge Structural Identification Applications: Case Studies,” 2001 ASCE Structures Congress in Washington DC, May 2001
- 1998              **Session Chair** for three conference sessions related to civil engineering education for the 1998 ASCE National Convention, Boston, MA. The sessions are titled:  
- The Evolving Capstone Design Course  
- Connections: Making Civil Engineering a Realistic Career Option  
- If I Had It To Do All Over Again...
- 1998              **Co-chair** (with Professor Achintya Haldar, University of Arizona) “Damage State Evaluation Using Structural Identification,” Structures Engineers World Congress (SEWC), San Francisco, CA, July 1998
- 1997              **Co-chair** (with Professor Masoud Sanayei, Tufts University) of the technical session, “State-of-the-Art of Structural Identification for Health Monitoring of Constructed Facilities” at the XV ASCE Structures Congress in Portland, Oregon, April 1997

### ***Service as a Reviewer***

- National Science Foundation Site Review Panelist (Engineering Research Centers, National Earthquake Engineering Simulation program, and ADVANCE)
- National Science Foundation Panel Reviews (panelist & panel co-chair & mail reviewer)
- Journal of Computer-Aided Civil and Infrastructure Engineering
- Journal of Structural Engineering, American Society of Civil Engineers
- Journal of Engineering Mechanics, American Society of Civil Engineers
- Journal of Infrastructure Systems, American Society of Civil Engineers
- Computers and Structures Journal
- National Academy of Engineering

## **SERVICE AND PROFESSIONAL DEVELOPMENT: PROFESSIONAL SERVICE** *(continued)*

### ***National Educational and Related Outreach Activities***

- 2003 – 2006      **Elected Member**, Education and Outreach Committee, Network for Earthquake Engineering Simulation – also listed under professional service.
- 1999              **Attended**, the American Institute for Steel Construction Steel Educators Forum, Needham Sheraton, Needham, MA. August 18, 1999
- 1998              **Created the Student Program** at the American Society of Civil Engineers Annual Convention held in Boston, MA; October 18 – 22, 1999
- 1995 - 1998      **Member**, Student Affairs Committee, Boston Society of Civil Engineers, ASCE
- 1995 - 1996      **Liaison and Advisor** to Burke High School and Wilson Junior High School (schools in the Boston Public Schools system) in their applied math and science programs
- 1995              **Participant**, National Effective Teaching Institute (part of the American Society for Engineering Education Annual Conference) in Anaheim, CA June 22-28, 1995

### ***Community Service***

*Service to the community revolves around professional educational interests such as the work with the Patriots' Trail Girl Scout Council linking to the CONNECTIONS program and personal priorities by being involved in the education environment of two young children.*

- 2009              **Mentor**, Ambrose Elementary 4<sup>th</sup> – 5<sup>th</sup> grade, Winchester Career Mentor Program. Worked with three 4<sup>th</sup> graders to teach them bridge design philosophies using the West Point Bridge Program.
- 2008 – present   **Treasurer**, Ambrose Elementary School Parent Teacher Organization
- 2001 – 2006      **Member**, Parent's Advisory Council, Creative Corner Childcare Center
- 1996 – 2002      **Active collaboration** with the Boston area Patriots' Trail Girl Scout Council. These efforts include organizing campus events for middle school and high school girls

## **SERVICE AND PROFESSIONAL DEVELOPMENT: PROFESSIONAL SERVICE** *(continued)*

### ***Professional Development***

- 2004        **Invited Participant**, Institutional Transformation / Advanced Leadership Workshop. Syracuse, New York, October 7 – 10, 2004.
- 2000        **Nominated and Accepted Participant**, National Science Foundation Women in Engineering Leadership Conference, October 11-15, 2000, Winter Park, Colorado. Conference attendance required an application process where 36 of 160 applicants (22.5%) were accepted to attend
- 1997        **Invited Participant**, National Science Foundation Civil and Mechanical Systems Workshop for the Advancement & Retention of Underrepresented & Minority Engineering Educators, September 23 - 26, 1997, Arlington, VA

### ***Society Memberships (Current and Past)***

- Network for Earthquake Engineering Simulation (NEES)
- American Society of Civil Engineers (ASCE)
- Society of Women Engineers (SWE)
- Boston Society of Civil Engineers (BSCES)
- American Society of Engineering Education (ASEE)
- Earthquake Engineering Research Institute (EERI)
- Transportation Research Board (TRB) Affiliate
- Women's Engineering Leadership Institute (WELI)