

PROFESSOR FENIOSKY PEÑA-MORA CURRICULUM VITAE
THE FU FOUNDATION SCHOOL OF ENGINEERING AND APPLIED SCIENCE
COLUMBIA UNIVERSITY

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Date: February 18, 2018

- 1. Name:** Peña-Mora, Feniosky Avelhermí **Citizenship:** USA
- 2. Present Academic Rank:** Endowed Professor **YOB:** 1966
- 3. Tenure Status:** Tenured
- 4. Administrative Title:**

5. Degrees	Field	Institution	Date Awarded
B.S.	Civil Engineering	UNPHU*	1987 Magna Cum Laude
Post-Graduate	Civil Engineering	UNPHU*	1988 Magna Cum Laude
S.M.	Civil Engineering	MIT	1991
Sc.D.	Civil Engineering Systems	MIT	1994

*UNPHU Universidad Nacional Pedro Henríquez Ureña, Santo Domingo, Dominican Republic

6. Academic Positions Held

XL Instructor	MIT	September 1992 - May 1993
Instructor	MIT	February 1994 - May 1994
Postdoctoral Associate (Central Artery*)	MIT	September 1994 - June 1995
Assistant Professor	MIT	July 1995 - July 1999
Gilbert W. Winslow Career Development Chair	MIT	September 1996-Sept. 1998
IESL Co-Director	MIT	September 1996 - June 2003
Associate Professor	MIT	July 1999 - June 2003
Visitor	University of Sydney	August 1999
Visiting Associate Professor	UIUC	August 2002 - June 2003
Associate Professor	UIUC	June 2003 - August 2006
W. E. O'Neil Faculty Scholar	UIUC	June 2003 - January 2008
Visiting Professor	EPFL	July 2006
Visiting Professor	Loughborough University	July 2006 - July 2007
Associate Provost Fellow	UIUC	August 2006 -December 2007
Senior Associate Dean	UIUC	January 2007 - May 2007
Professor	UIUC	August 2006 - July 2009
Center Affiliate	NCSA/UIUC	August 2006 - July 2009
Faculty Affiliate	Beckman/UIUC	January 2008 - July 2009

Associate Provost	UIUC	January 2008 - July 2009
Edward William and Jane Marr Gutsell Endowed Professor	UIUC	January 2008 - July 2009
Visiting Professor	UIUC	July 2009 – July 2012
Dean of the School of Engineering and Applied Science	Columbia University	July 2009 – July 2012
Morris A. and Alma Schapiro Professor of Engineering	Columbia University	July 2009 – July 2012
Professor, Department of Civil Engineering and Engineering Mechanics, of Earth and Environmental Engineering, of Computer Science	Columbia University	July 2009 – September 2012
Guest Professor	Guishou Institute of Technology, China	July 2013
Visiting Fellow of the Royal Academy of Engineering	Salford University, UK	March 2014
Visiting Fellow of the Royal Academy of Engineering	Manchester University, UK	March 2014
Visiting Fellow of the Royal Academy of Engineering	Cambridge University, UK	March 2014
Professor, Department of Earth and Environmental Engineering	Columbia University	July 2009 - Present
Professor, Department of Computer Science	Columbia University	July 2009 - Present
Edwin Howard Armstrong Professor, Department of Civil Engineering and Engineering Mechanics	Columbia University	September 2012 – Present
Visiting Chair Professor	Tsinghua University, China	July 2013 – Present
Visiting Chair Professor	Nankai University, China	September 2017 - Present

*In residence at the Boston Central Artery/Tunnel Project.

7. a. Other Professional Employment

Montes de Oca	Const. Supervisor	Dominican Rep.	May 1986 - Dec. 1987
Ricart-Mubarak	Structural Engineer	Dominican Rep.	Jan. 1987 - Mar. 1988
Kajima Co.	Summer Intern	Japan	July 1991 - Aug. 1991
Central Artery Department of Design And Construction	Asst. to Director	Boston, MA, USA	Sept. 1994 - June 1995
	Commissioner	NY, NY	April 2014-June 2017

b. Major Consulting Activities

Peña Alcántara Consultants	Boston, MA, USA	Jan. 1995 – present
Boston Public Facilities Department	Boston, MA, USA	Sept. 1996 - Feb. 1997
Omega-Alpha S.A.	Colombia	Aug. 1997 - Jan. 1999
Techint	Argentina	Apr. 1997 - Aug. 1997
Ministry of Economic Dev.	Colombia	May 1997 - Aug. 1997
Barrington/InteCap	Boston, MA, USA	Sept. 1997 - June 1999
Massachusetts Turnpike Authority	Boston, MA, USA	Oct. 1998 - Apr. 1999
in Meeting	Boston, MA, USA	Feb. 2000 - Mar. 2002
Responsible for raising \$1.5 Millions in angel investments		

c. Professional Registrations

Registered Professional Civil Engineer, Dominican Republic, Exequatur 411, Sept. 7th 1988, No. 7986
Chartered Construction Manager, United Kingdom, Membership 2013066, Dec. 10, 2014

8. Honors, Recognition and Outstanding Achievements

a. Student

UNPHU* Honor Board	1982 - 84, 1985 - 87
Dominican Board of Universities Academic Excellence Award	Nov. 1987
Valedictorian, UNPHU* Engineering School	Nov. 1987
Magna Cum Laude Bachelor's Degree UNPHU	Nov. 1987
Magna Cum Laude Post-Graduate Degree UNPHU	April 1988
NSF Minority Fellowship Honorable Mention	1991 - 1992
Ford Foundation Fellowship	1991 - 1994

b. Research

ASCE Journal of Computing in Civil Engineering Best Paper Award	1995
Gilbert W. Winslow Career Development Chair	1996 - 1998
James H. Ferry Fund Award	1997 - 1999
Marion and Jasper Whiting Foundation Fellowship	1997 - 1998
Cordell W. Hull New Initiatives in Engineering Education Award	1998 - 1999
NSF CAREER Award	1999 - 2003
White House PECASE Award	1999 - 2004
W. E. O'Neil Faculty Scholar	2003 - 2007
Plenary Speaker, National Academy of Engineering Frontiers of Engineering Symposium, Irvine, CA	2003
Keynote Speaker, ASCE 2003 Convention, Information Technology in Civil Engineering Conference, Nashville, TN	2003
Caterpillar Lecture, University of Iowa (<i>distinguished</i>)	2003
Plenary Speaker, National Academies Convocation on Facilitation Interdisciplinary Research, Washington DC	2004
Dean's Distinguished Lecture, Rice University	2005
Walter L. Huber Civil Engineering Research Prize	2007
Member, National Academies Committee on Advancing the Productivity and Competitiveness of the U.S. Construction Industry	2008

Edward William and Jane Marr Gutgsell Endowed Professor	2008
ASCE Computing in Civil Engineering Award	2008
Morris A. and Alma Schapiro Professorship	2009
6 th International Conference on Innovation in AEC, State College, PA	
Best Student Paper Award for Ph.D. Student,	2010
Construction Industry Institute's Annual Conference, Orlando, FL	
Best Poster Award by Ph.D. Student	2010
ICCEPM-2011, Sydney, Australia Excellent Paper Award,	2011
FIATECH Celebration of Engineering & Technology Innovation Award,	
Outstanding Researcher category, Phoenix, AZ	2011
ASCE Journal of Construction Engineering and Management	
Best Journal Paper Award	2011
ASCE Construction Research Congress, Purdue University	
First-Place Best Poster Award	2012
ASCE Visualization, Information Modeling, and Simulation (VIMS) Committee	
Best Conference Paper Award	2012
ASCE International Conference on Computing in Civil Engineering	
Best paper award	2012
International Conference in Construction Engineering and Project Management	
Best Paper Award	2013
ASCE James R. Croes Medal	2013
China Beijing Thousand Talents Program Expert – Short Term	2014
Fellow of the Chartered Institute of Building	2014
ASCE Construction Management Award	2014
ASCE Journal of Computing in Civil Engineering Best Journal Paper Award	2014
ASCE Journal of Management in Engineering Best Peer Reviewed Paper Award	2015
CIOB (Chartered Institute of Buildings) International Outstanding	
Achievement Awards: Business Management	2016
Member of the Academy of Sciences of the Dominican Republic	2016
Member of the US National Academy of Construction	2016
Thousand Talents Program from Tianjin Municipal	
Bureau of Foreign Experts Affairs	2018

c. Public Service and Leadership

Certificate of Recognition from New England / Boston Section of The Association for the Advancement of Cost Engineering Through Total Cost Management	April 14, 1999
Recognition of Service for Leadership as Co-Chair of the Diversity Initiatives Committee, University of Illinois at Urbana-Champaign	2006 - 2007
American Council on Education: ACE Fellows Program	2009 (differed)
Dominican American National Roundtable Guanín Award	2009
Hispanic Heritage Award, Police Department, City of New York, Hispanic Society of P.D. N.Y.C., and New York Dominican Officers Organization	2009
Le Marteleur Award for Distinguished Service to Columbia Engineering Young Alumni	2010
Carnegie Corporation of New York - Immigrants: The Pride of America (New York Times)	July 2, 2010
Honor from New York State Association of Black, Puerto Rican, Latino and Asian Legislative Caucus	2012

Proclamation of Monday, February 27, 2012 as “Dean Feniosky Peña-Mora Appreciation Day” in the Borough of Manhattan by Scott M. Stringer, President, Borough of Manhattan	February 27, 2012
Honor from the City of New York Office of the Public Advocate for being a positive role model and engineering pioneer to the Dominican community	February 27, 2012
Commendation from the City of New York Office of the Comptroller for the many innovations in the fields of teaching, research and engineering; for hands-on leadership in managing groundbreaking university engineering programs; for service as an energetic and articulate advocate; and for tremendous contributions to the City of New York	February 27, 2012
Honor from New York City Council by Council Member Ydannis Rodriguez, 10 th District Manhattan, for inspirational contributions to the field of Engineering and Applied Sciences and for excellence in educating socially responsible engineering and applied science leaders. Recognized by the Dominican community as a source of profound pride	February 27, 2012
Honor from New York State Senator Adriano Espaillat, 31 st Senate District, for being a special public servant who goes above and beyond to help others, demonstrating exemplary dedication and accomplishments along the way	February 27, 2012
Certificate of Appreciation US Environmental Protection Agency, Region 2 Hispanic Employment Program (HEP)	September 18, 2012
Certificate of Appreciation Professional Women in Construction	September 16, 2014
Certificate of Appreciation Construction Management Association of America Metro New York-New Jersey Chapter for Promoting and enhancing the Construction Management Profession	October 29, 2014
Recognition of Excellence NED University of Engineering and Technology Alumni Association of Tri-State NY-NJ-CT	2015
Champion Award from the Women Builders Council for shaping and advancing diversity and equal opportunity in the AEC Industry	March 12, 2015
Professional Recognition by the Dominican College of Engineers, Architects, and Surveyors	May 30, 2015
Public Owner of the Year- Civilian Honoree, New York City Post, Society of American Military Engineers	November 7, 2015
Leadership Award by the Tri-State Arab American Association of Engineers And Architects	November 15, 2015
Municipal Engineer of the Year, Municipal Engineers of the City of New York	November 20, 2015
Outstanding Contributions Award by the American Association of Bangladeshi Engineers and Architects, New York Chapter	November 2015
Dominican Role Model Award from the Metropolitan Transit Authority (MTA) Dominican Society of Professionals in Transit (DSPT)	December 23, 2015
New York City Department of Design and Construction EID Committee Recognition	2016
Diversity Champion Award: Building Innovation from the Women Construction Owners and Executives	April 4, 2016
Recognition by the Dominican Republic American Chamber of Commerce	June 21, 2016
Distinguished Member, New York Coalition of Black Architects The New York Chapter of the National Organization of Minority Architects (NYCOBA NOMA)	July 14, 2016
Pabellon Excelencias Sancarleñas USA Honor al Merito y Reconcimiento	August 28, 2016

New York City Council Citation for Outstanding Citizenship by Honorable Julissa Ferreras	August, 2016
Illustrious Award from the Institute for Latino Studies	September 24, 2016
Distinguished Son of Santo Domingo, First City in the Americas 1496 by Mayor David Collado and City Council of the National District, DR	November 25, 2016
Academic and Professional Excellence Recognition, Dominican College of Engineers, Architects, and Surveyors	November 28, 2016
Architecture-Construction-Engineering (ACE) Mentor Program Public Sector Honoree	May 12, 2017
Distinguished Expert, Liaocheng Municipal Government, China	September 2017

FACTUAL INFORMATION

A. Resident Instruction and Continuing Education

1. Resident Instruction

Term	Subject Number	Title	Role
FT92	6.001	Structure and Interpretation of Computer Programs	XL Facilitator
ST93	18.01	Calculus I	XL Facilitator
IAP96	1.992	Introduction to C++	Lectures, in charge
ST94	1.12	Computer Models for Physical and Engineering Systems	Lectures, in charge
ST95	1.12	Computer Models for Physical and Engineering Systems	Lectures, in charge
FT96	S1.40	The "Big Dig" Freshman Seminar	Seminar, co-in charge
ST96	1.12	Computer Models for Physical and Engineering Systems	Lectures, in charge
FT97	1.432	Project Control	Lectures, in charge
FT97	1.120	Master of Engineering Information Technology Project	Lectures, co-in charge
FT97	S1.40	The "Big Dig" Freshman Seminar	Seminar, co-in charge
IAP97	1.120	Master of Engineering	Lectures, co-in charge

		Information Technology Project	
ST97	1.12	Computer Models for Physical and Engineering Systems	Lectures, in charge
ST97	1.120	Master of Engineering Information Technology Project	Lectures, co-in charge
FT98	1.432	Project Control	Lectures, in charge
FT98	1.120	Master of Engineering Information Technology Project	Lectures, in charge
IAP98	1.120	Master of Engineering Information Technology Project	Lectures, in charge
ST98	1.120/1.119	Master of Engineering Information Technology Project	Lectures, in charge
FT99	1.432/15.967	Project Control / System and Project Management	Lectures, co-in charge
FT99	1.120/1.118	Master of Engineering Information Technology Project	Lectures, in charge
IAP99	1.120/1.118	Master of Engineering Information Technology Project	Lectures, in charge
ST99	1.120/1.119	Master of Engineering Information Technology Project	Lectures, in charge
FT00	1.120/1.118	Master of Engineering Information Technology Project	Lectures, in charge
IAP 00	1.120	Master of Engineering Information Technology Project	Lectures, in charge
ST00	1.120/1.119	Master of Engineering Information Technology Project	Lectures, in charge

charge	ST01		1.118	Distributed Development of Collaborative Engineering Support Systems	Lectures, in
	FT01		1.118	Distributed Development of Engineering Information Systems	Lectures, in charge
	ST02		1.40/1.401	Project Management	Lectures, in charge
	ST03		1.40/1.401	Project Management	Lectures, in charge
	ST03		CEE 498	Construction Conflict Resolution and Collaboration	Lectures, in charge
	FT03		CEE 216	Construction Eng. & Mgmt.	Lectures, in charge
	ST04		CEE 216	Construction Eng. & Mgmt.	Lectures, in charge
	ST04		CEE 495	Construction Management	Seminar, in charge
	FT04		CEE 320	Construction Eng. & Mgmt.	Lectures, in charge
	ST05		CEE 320	Construction Eng. & Mgmt.	Lectures, in charge
	ST04		CEE 595	Construction Management	Seminar, in charge
	ST05		CEE 598	Construction Conflict Resolution and Collaboration	Lectures, in charge
	FT05		CEE 320	Construction Eng. & Mgmt.	Lectures, in charge
	ST06		CEE 320	Construction Eng. & Mgmt.	Lectures, in charge
	ST06		CEE 595	Construction Management	Seminar, in charge
	FT06		CEE 320	Construction Eng. & Mgmt.	Lectures, co-in charge
	ST07		CEE 320	Construction Eng. & Mgmt.	Lectures, co-in charge
	ST07		CEE 598	Construction Conflict Resolution and Collaboration	Lectures, co-in charge
	ST10		CIEN9101	Civil Engineering Research	Independent Study, in charge
	FT10		CIEN9101	Civil Engineering Research	Independent Study, in charge
	ST11		CIEN9101	Civil Engineering Research	Independent Study, in charge
	FT11		CIEN9101	Civil Engineering Research	Independent Study, in charge

ST12	CIEN9101	Civil Engineering Research	Independent Study, in charge
SU12	CIEN9101	Civil Engineering Research	Independent Study, in charge
FT12	CIEN9101	Civil Engineering Research	Independent Study, in charge
ST13	CIENE4135	Strategic Management Design and Construction	Lectures, in charge
ST13	CIENE4136	Entrepreneurship Civil Engineering and Construction	Lectures, in charge
ST13	CIEN9101	Civil Engineering Research	Independent Study, in charge
SU13	CIEN9101	Civil Engineering Research	Independent Study, in charge
FT13	CIEN9101	Civil Engineering Research	Independent Study, in charge
ST14	CIENE4135	Strategic Management Design and Construction	Lectures, in charge
ST14	CIENE4136	Entrepreneurship Civil Engineering and Construction	Lectures, in charge
ST14	CIENE6132	Advanced Systems and Technologies for Global Project Collaboration	Lectures, in charge
ST14	CIEN9101	Civil Engineering Research	Independent Study, in charge
FT14	CIEN9101	Civil Engineering Research	Independent Study, in charge
ST15	CIEN9101	Civil Engineering Research	Independent Study, in charge
ST15	COMS6901	Projects in Computer Science	Independent Study, in charge
FT15	CIEN9101	Civil Engineering Research	Independent Study, in charge
FT15	COMS6901	Projects in Computer Science	Independent Study, in charge
ST16	CIEN9101	Civil Engineering Research	Independent Study, in charge
ST16	COMS6901	Projects in Computer Science	Independent Study, in charge
FT16	COMS4901	Projects in Computer Science	Independent Study, in charge
FT16	COMS6901	Projects in Computer Science	Independent Study, in charge
FT16	CIEN9101	Civil Engineering Research	Independent Study, in charge

ST17	CIEN9101	Civil Engineering Research	Independent Study, in charge
FT17	CIEN9101	Civil Engineering Research	Independent Study, in charge

2. Continuing Education *(credit courses only)*

Year	Course		Delivery method*/# of Students
SU97	1.61s	Project Management for Engineers and Managers	Live-on-Site 35
SU97	1.70s	Use of Information Technology for Project Management	Live-on-Site 21
IAP98	1.61w	Project Management for Engineers and Managers	Live-on-Site 17
SU98	1.61s	Project Management for Engineers and Managers	Live-on-Site 40
SU98	1.70s	Use of Information Technology for Project Management	Live-on-Site 20
IAP99	1.61w	Project Management for Engineers and Managers	Live-on-Site 19
SU99	1.61s	Project Management for Engineers and Managers	Live-on-Site 37
FT00	1.61s	Project Management for Engineers and Managers	Live Transmitted/Video Tape 25
ST 03	MIT 505	Distributed Development of Engineering Information Systems	Video Tape/Web Transmission 15
ST 03	CEM 506	Distributed Development of Engineering Information Systems	Video Tape/Web Transmission 20

*live on site, live transmitted, video tape, other

3. Other Instructional Activities

Term	Subject Number	Title	Role
FT93	1.12	Computer Models for Physical and Engineering Systems	Subject Development
FT96	1.992	Introduction to C++	Course Development

ST96	1.432	Project Control	Course Development
ST97	1.120	Master of Engineering Information technology Project	Course Re-Development
SU97	1.120	Master of Engineering Information technology Project	Course Re-Development
SU98	15.967	System and Project Management	Course Re-Development
IAP01	1.118	Distributed Development of Collaborative Engineering Support Systems	Course Re-Development
IAP02	1.40/1.401	Project Management	Course Development
SU03	CEE 216	Construction Eng. & Mgmt.	Course Development
FT 03		Khalied Hyari	Prelim
FT 03		Seok Yon Hwang	Qualifier
ST 04		Ahmed Khalafallah	Qualifier
ST 04		Khalied Hyari	Final Exam
SU 04		Ioannis Brilakis	Prelim
SU 04		Ken-Yu Lin	Prelim
FT 04		Anshu Manik	Prelim
FT 04		Amr Kandil	Prelim
ST 05		Ioannis Brilakis	Final Exam
ST 05		Ken-Yu Lin	Final Exam
ST 05		Amr Kandil	Final Exam
FT 05		Anshu Manik	Final Exam
ST 06		Ahmed Khalafallah	Prelim
FT06		Carol Menassa	Qualifier
FT06		SangWon Han	Qualifier

FT06	Yun-Yi Su	Qualifier
FT07	Sangwon Han	Prelim
FT07	Omar EL-Anwar	Qualifier
FT07	Ibrahim Odeh	Prelim
ST08	Carol Menassa	Prelim
ST08	Hisham Saeed	Qualifier
ST08	Hesham Osman	Final Exam
ST08	Ibrahim Odeh	Prelim
FT08	Omar EL-Anwar	Prelim
FT08	Sangwon Han	Final Exam
FT08	Mani Golparvar-Fard	Qualifier
FT08	Albert Chen	Qualifier
ST09	Mani Golparvar-Fard	Prelim
ST09	Albert Chen	Prelim
ST09	Changbum Ahn	Qualifier
ST09	SangUk Han	Qualifier
ST10	Mani Golparvar-Fard	Final Exam
ST11	Albert Chen	Final Exam
ST11	Xinyi Song	Qualifier
ST12	Changbum Ahn	Prelim
ST12	Changbum Ahn	Final Exam
ST13	SangUk Han	Prelim
ST13	SangUk Han	Final Exam
FT14	Muqing Liu	Prelim
ST15	Muqing Liu	Final Exam

4. Undergraduate Advising

- a. academic advising 0 (*number of students, current year only*)
- b. student organizations (*list past five years*)
- c. design teams (*past five years*)
- d. other (*individual projects, engineering open house, etc. past five years*)

B. Research, Creative, and Other Scholarly Activities

1. Publications

Note:

A single asterisk(*) before any publication shows it has undergone stringent editorial review by peers. A double asterisk(**) before any publication indicates it was invited and carries with it prestige and recognition. An s before a publication shows work was undertaken based on work as a student. Place a w before any publication co-authored with students you supervise.

a1. Books Authored or Co-Authored, Original Editions

1. *w Peña-Mora, F., Sosa, C., and McCone, S., Dispute Avoidance and Resolution in Large Scale Civil Engineering Systems, MIT/Prentice Hall Civil and Environmental Engineering Textbook Series, August 2002.

a2. Books Authored or Co-Authored, Revisions

b1. Books Edited or Co-Edited, Original Editions

1. Fruchter, R., Peña-Mora, F., and Roddis, K. (eds.), Computing in Civil and Building Engineering, ASCE Press, Reston, VA, 2000.
2. Soibelman, L., and Peña-Mora, F. (eds.), Computing in Civil Engineering, ASCE Press, Reston, VA, 2005.
3. Soibelman, L., and Peña-Mora, F. (eds.), Sustainable Infrastructure, ASCE Press, Reston, VA, 2017.

b2. Books Edited or Co-Edited, Revisions

c. Chapters in Books

1. ** Peña-Mora, F., Strumminger, R., Favela, J., Hussein, K., and Losey, R., “Supporting a ‘Real World’ Project-Based, Technology-Supported, Collaborative, Distance Learning Environment: The MIT-CICESE Distributed System Engineering Lab” in Collaborative Design and Learning: Competence Building for Innovation, Edited by João Bento, José Duarte, Manuel Heitor and William Mitchell, November 2004.

2. **w Vadhavkar, S. and Peña-Mora, F., “Geographically Distributed Team Interaction Space - An Empirical Study,” in *The Role of Empirical Studies in Understanding and Supporting Engineering Design*, Edited by Eswaran Subrahmanian, Ram Sriram, Paulien Herder, Henri Christiaans, and Ralph Schneider, Delft University Press, The Netherlands, pp. 86-102, December 2004.
3. **w Golparvar-Fard, M. and Peña-Mora, F., “Design, Implementation, Management and Support of Information and Collaborative Technologies: a Supply Chain Perspective”, in the *Construction Supply Chain Management Handbook*, Edited by William O’Brian.
4. ** Culligan, P. and Peña-Mora, F. (2010) “Interdisciplinarity in Engineering” in the *Oxford Handbook on Interdisciplinarity (HOI)*, Oxford University Press, Oxford, UK, Edited by James Holbrook and Robert Frodeman, July 2010.
5. **w McDonagh, D., Thomas, J., Khuri, L., Heft Sears, S., and Peña-Mora, F., “Empathetic Design Research Strategies: Designing for, with and by People with Disabilities,” in *Handbook of Research on Trends in Product Design and Development: Technological and Organizational Perspectives*, Edited by Arlindo Silva and Ricardo Simões, Business Science Reference, New York, pp. 58-79, 2011.
6. **w Peña-Mora, F., Golparvar-Fard, M., Aziz, Z., and Roh, S. (2011). “Design Co-Ordination and Progress Monitoring during the Construction Phase using Building Information Modeling Collaborative Design in Virtual Environments,” Ed. Wang and Tsai, Springs ISBN 978-94-007-0604-0, Vol. 48., pp. 89-99.

d. Monographs [longer than an article, but shorter than a book]

e1. Articles in Journals

1. *s Peña-Mora, F. and Logcher, R., “Capturing Design Assumptions for Rational Coordination, Integration and Negotiation in the Design Process,” *Computing Systems in Engineering*, Vol. 3, No. 6, pp. 651-660, 1992.
2. *s Peña-Mora, F., Sriram, D., and Logcher, R., “Design Rationale for Computer Supported Conflict Mitigation,” *ASCE Journal of Computing in Civil Engineering*, Vol. 9, No. 1, pp. 57-72, January 1995. *Received the 1995 Best Paper Award from the ASCE Technical Council on Computer Practices.*
3. *s Peña-Mora, F., Sriram, D., and Logcher, R., “Conflict Mitigation System for Collaborative Engineering,” *AI EDAM-Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, Special Issue on Concurrent Engineering, Vol. 9, No. 2, pp. 101-124, May 1995.
4. *w Peña-Mora, F., Hussein, K., and Sriram, D., “CAIRO: A System for Facilitating Communication in a Distributed Collaborative Engineering Environment,” *Computers in Industry*, Vol. 29, No. 1-2, pp. 37-50, July 1996.
5. *w Peña-Mora, F. and Vadhavkar, S., “Augmenting Design Patterns with Design Rationale,” *AI EDAM - Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, Special Issue on Design Rationale, Vol. 11, No. 2, pp. 93-108, April 1997.
6. *w Peña-Mora, F. and Wang, C., “Computer-Supported Collaborative Negotiation Methodology,” *ASCE Journal of Computing in Civil Engineering*, Vol. 12, No. 2, pp. 64-81, April 1998.

7. *w Peña-Mora, F. and Hussein, K., "Proactive Meeting Management for Distributed Collaborative Design," *International Journal of Advances in Engineering Software*, Vol. 29, No. 10, pp. 839-849, December 1998.
8. *w Peña-Mora, F. and Hussein, K., "Interaction Dynamics in Collaborative Civil Engineering Design Discourse: Applications in Computer Mediated Communication," *Journal of Computer-Aided Civil and Infrastructure Engineering*, Vol. 14, pp. 171-185, May 1999.
9. *w Hussein, K. and Peña-Mora, F., "Frameworks for Interaction Support in Distributed Learning Environments," *ASCE Journal of Computing in Civil Engineering*, Vol. 13, No. 4, pp. 291-302, October 1999.
10. *w Peña-Mora, F., Vadhavkar, S., Perkins, E., and Weber, T., "Information Technology Planning Framework for Large-Scale Projects," *ASCE Journal of Computing in Civil Engineering*, Vol. 13, No. 4, pp. 226-237, October 1999.
11. *w Peña-Mora, F., Anumba, C., and Solari, J., "An Integrated Telepresence Environment for Collaboration in Construction," *Engineering with Computers: International Journal for Simulation-Based Engineering*, Special Issue honoring Prof. Steve Fenves on Computer Aided Engineering, Vol. 16, No. 3-4, pp. 287-305, April 2000.
12. *w Soibelman, L. and Peña-Mora, F., "Distributed Multi-Reasoning Mechanism to Support Conceptual Structural Design," *ASCE Journal of Structural Engineering*, Vol. 126, No. 6, pp. 733-742, June 2000.
13. *w Peña-Mora, F., Hussein, K., Vadhavkar, S., and Benjamin, K., "CAIRO: A Concurrent Engineering Meeting Environment for Virtual Design Teams," *Artificial Intelligence in Engineering Journal*, Special issue on Concurrent Engineering, Vol. 14, No. 3, pp. 203-219, July 2000.
14. *w Peña-Mora, F. and Harpoth, N., "Effective Partnering in an Innovative Procured Multicultural Project," *ASCE Journal of Management in Engineering*, Vol. 17, No. 1, pp. 2-13, Jan-Feb 2001.
15. *w Peña-Mora, F., and Li, M., "Dynamic-Planning and Control Methodology for Design/Build Fast-Track Construction Projects," *ASCE Journal of Construction Engineering and Management*, Vol. 127, No. 1, pp. 1-17, January-February 2001.
16. *w Favela, J. and Peña-Mora, F., "An Experience in Collaborative Software Engineering Education," *IEEE Software*, Vol. 18, No. 2, pp. 47-53, March-April 2001.
17. *w Peña-Mora, F. and Tamaki, T., "Effect of Delivery Systems on a Collaborative Negotiations for Large-Scale Infrastructure Projects," *ASCE Journal of Management in Engineering*, Vol. 17, No. 2, pp. 105-121, March-April 2001.
18. *w Peña-Mora, F., Vadhavkar, S., and Dirisala, S., "Component-Based Software Development for Integrated Construction Management Software Applications," *AI EDAM - Artificial Intelligence for Engineering, Design Analysis and Manufacturing Journal*, Vol. 15, No. 2, pp. 173-187, April 2001.
19. *w Peña-Mora, F. and Choudary, K., "Web-Centric Framework for Secure and Legally Binding Electronic Transactions in Large Scale A/E/C Projects," *ASCE Journal of Computing in Civil Engineering*, Vol. 15, No. 4, pp. 248-258, October 2001.

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21. *w Peña-Mora, F. and Dwivedi, G. "A Multiple Device Collaborative and Real Time Analysis System for Project Management in Civil Engineering," ASCE Journal of Computing in Civil Engineering, Vol. 16, No. 1, pp. 23-38, January 2002.
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29. w Lee, S., Peña-Mora, F., and Park, M., "Reliability and Stability Buffering Approach in Concurrent Design and Construction Projects," 11th Annual Conference, IGLC (International Group of Lean Construction), Blacksburg, Virginia, July 22-24, 2003.
30. *w Aldunate, R., Nussbaum, M., and Peña-Mora, F., "An Empirical Wi-Fi Based Location Mechanism for Urban Search and Rescue Operations," Lecture Notes in Computer Science, Springer-Verlag, Vol. 2957, 2004, pp. 48-61.
31. *w Lee, S., Peña-Mora, F., and Park, M., "Dynamic Error and Change Management in Concurrent Design and Construction," ASCE Construction Research Congress, San Diego, CA, April 5-7, 2005.
32. *w Han, S., Park, M., and Peña-Mora, F., "Comparative Study of Discrete-Event Simulation and System Dynamics for Construction Process Planning," ASCE Construction Research Congress, San Diego, CA, April 5-7, 2005.
33. w Lee, S., Peña-Mora, F., "System Dynamics Approach for Error and Change Management in Concurrent Design and Construction," 2005 Winter Simulation Conference, Institute of Electrical and Electronics Engineers (IEEE), Piscataway, NJ, 2005.
34. w Lee, S., Peña-Mora, F., "Latency in Error and Change Management," 11th International Conference on Computing in Civil and Building Engineering, 2006 Joint International Conference on Computing and Decision Making in Civil and Building Engineering, ICCCB-XE, Montreal, Canada, June 14-16, 2006.
35. w Lee, S., Peña-Mora, F., "Visualization of Construction Progress Monitoring," 11th International Conference on Computing in Civil and Building Engineering, 2006 Joint International Conference on Computing and Decision Making in Civil and Building Engineering, ICCCB-XE, Montreal, Canada, June 14-16, 2006.
36. w Han, S., Peña-Mora, F., Lee, S., Park, M., "Hybrid Strategic and Operational Project Management," 11th International Conference on Computing in Civil and Building Engineering, 2006 Joint International Conference on Computing and Decision Making in Civil and Building Engineering, ICCCB-XE, Montreal, Canada, June 14-16, 2006.
37. w Menassa C. and Peña-Mora F., "An Option-Based Model for Evaluating ADR Investments in Design and Construction Projects," 11th International Conference on Computing in Civil and Building Engineering, 2006 Joint International Conference on Computing and Decision Making in Civil and Building Engineering, ICCCB-XE, Montreal, Canada, June 14-16, 2006.
38. w Son, J. and Peña-Mora, F., "Improvement of Collaboration among First Responders Including Civil Engineers during Disaster Response in Urban Areas," 11th International Conference on Computing in Civil and Building Engineering, 2006 Joint International Conference on Computing and Decision Making in Civil and Building Engineering, ICCCB-XE, Montreal, Canada, June 14-16, 2006.
39. w Aldunate, R., Koustoula, D., Peña-Mora, F., and Lakhera, S., "A Decentralized Trust Model to Reduce Information Unreliability in Complex Disaster Relief Operations," Lecture Notes in Computer Science, Springer Berlin /Heidelberg, 2006, Vol. 4200, pp. 383-407.
40. w Tsai, M.-H., Liu, L. Y., Peña-Mora, F., "Designing Building Black-Boxes to Support Disaster Relief Efforts," 19th International Conference on Computer Application in Industry and Engineering, CAINE, Las Vegas, NV, Nov 13-15, 2006.

41. w Lee, S., Peña-Mora, F., “Lessons Learned from Applying System Dynamics to Construction Simulation,” 13th EG-ICE Workshop, Ascona, Switzerland, 2006.
42. w Menassa, C. and Peña-Mora, F., “A System Dynamics Model to Evaluate the Impact of Uncertainty on ADR Investments in AEC Projects,” 2007 ASCE Construction Research Congress, Grand Bahamas Island, May 6-8, 2007.
43. w Menassa, C. and Peña Mora, F. “An Option Based Dynamic Optimization Model To Evaluate ADR Investments In AEC Construction Projects.” Proceedings of the 25th Construction Management and Economics: Past, Present, and Future, Taylor and Francis, London, UK, 2007.
44. w Golparvar-Fard, M. and Peña-Mora, F., “Semi-Automated Visualization Techniques for Construction Progress Monitoring,” 2007 ASCE Construction Research Congress, Grand Bahamas Island, May 6-8, 2007.
45. w Bhagnani, K., Lee, S., Peña-Mora, F., Helmes, P., and Fulenwider, M., “Proactive Coordination to Reduce Structural Steel Delays,” 2007 ASCE Construction Research Congress, Grand Bahamas Island, May 6-8, 2007.
46. w Han, S., Peña-Mora, F., Lee, S., and Park, M., “Strategic-Operational Project Management for Managing Non-Value Adding Iterations,” 2007 ASCE Construction Research Congress, Grand Bahamas Island, May 6-8, 2007.
47. w Tsai, M.-H., Liu, L. Y., and Peña-Mora, F., “A Building Black Box for Supporting Disaster Response and Recovery,” 2007 ASCE Construction Research Congress, Grand Bahamas Island, May 6-8, 2007.
48. w Menassa, C. and Peña-Mora, F., “An Option Based Dynamic Optimization Model To Evaluate ADR Investments In AEC Construction Projects,” Construction Management and Economics 25th Anniversary Conference, University of Reading, United Kingdom, July 16-18, 2007.
49. w Golparvar-Fard, M., Sridharan, A., Lee, S., and Peña-Mora, F., “Visual Representation of Construction Progress Monitoring Metrics on Time-Lapse Photographs,” Construction Management and Economics 25th Anniversary Conference, University of Reading, United Kingdom, July 16-18, 2007.
50. w Lee, S., Peña-Mora, F., Helmes, P., and Fulenwider, M., “Theoretical Framework for Dynamic Project Management,” Construction Management and Economics 25th Anniversary Conference, University of Reading, United Kingdom, July 16-18, 2007.
51. w Golparvar-Fard, M. and Peña-Mora, F., “Application of Visualization Techniques for Construction Progress Monitoring,” ASCE International Workshop on Computing in Civil Engineering, Pittsburgh, PA, July, 25-28, 2007.
52. w Menassa, C. and Peña-Mora, F., “An Option Pricing Model to Evaluate ADR Investments in AEC Construction Projects Under Different Scenarios.” Proceedings of the 2007 ASCE International Workshop on Computing in Civil Engineering, Pittsburgh, PA, July, 25-28, 2007, pp.566-574.
53. w Lee, S. and Peña-Mora, F. (2007), “Hybrid System Dynamics and Discrete Event Simulation for Construction Management,” Proceedings of the 2007 ASCE International Workshop on Computing in Civil Engineering, Pittsburgh, PA, July, 25-28, 2007.

54. w Tsai, M.-H., Liu, L. Y., and Peña-Mora, F. (2007), "A Building Black Box for Urban Disaster Response and Relief," Proceedings of the 2007 ASCE International Workshop on Computing in Civil Engineering, Pittsburgh, PA, July, 25-28, 2007.
55. w Chen, A. Y., Tsai, M. H., Lantz, T., Plans, A. P., Mathur, S., Lakhera, S., Kaushik, N., and Peña-Mora, F. "A Collaborative Framework for Supporting Civil Engineering Emergency Response with Mobile Ad-Hoc Networks," Proceedings of the 2007 ASCE International Workshop on Computing in Civil Engineering, Pittsburgh, PA, July, 25-28, 2007.
56. w Han, S., Lee, S., Golparvar Fard, M., and Peña-Mora, F. (2007), "Modeling and Representation of Non-Value Adding Activities due to Errors and Changes in Design and Construction Projects." 2007 Winter Simulation Conference, IEEE, Washington, D.C., 2007.
57. w Han, S., Lee, S., and Peña-Mora, F. (2008), "Modeling the Dynamics of Non-Value Adding Activities due to Errors and Changes in Design and Construction Projects," 12th International Conference on Computing in Civil and Building Engineering & 2008 International Conference on Information Technology in Construction, Beijing, China, October 16-18, 2008.
58. w Menassa, C. and Peña-Mora, F. (2008). "A Decision Support System Based on Financial Real Option Theory to Analyze Dispute Resolution Investments in AEC Projects." 12th International Conference on Computing in Civil and Building Engineering & 2008 International Conference on Information Technology in Construction, Beijing, China, October 16-18, 2008.
59. w Han, S., and Peña-Mora, F., "Context-Aware Project Dice Game: Incorporating Management Recovery Actions to Minimize Variation in Construction Performance." 12th International Conference on Computing in Civil and Building Engineering & 2008 International Conference on Information Technology in Construction, Beijing, China, October 16-18, 2008.
60. w Peña-Mora, F., Aziz, Z., Golparvar-Fard, M., Chen, A.Y., Plans, A.P., and Mehta, S.J. "Emerging Technologies To Support Urban Resilience And Recovery", 7th International Symposium on New Technologies For Urban Safety Of Mega Cities In Asia, Beijing, China, October 21-22, 2008.
61. w Chen, A. Y., Peña-Mora, F., Ouyang, Y., and Aziz, Z. "Resource Allocation Using Collaborative GIS to Support Civil Engineering Emergency Response Operations," 12th International Conference on Computing and Building Engineering, 2008 International Conference on Information Technology in Construction, ICCCBE – XII, Tsinghua University, Beijing, China, Oct 16-18, 2008.
62. w Song, X., Peña-Mora, F., Arboleda, C., Conger, R., and Menassa, C. (2009). "The Potential Use of Insurance as a Risk Management Tool for ADR Implementation in Construction Disputes." Accepted for publication and presentation at the 2009 ASCE International Workshop on Computing in Civil Engineering, Austin, TX, June 24-27, 2009.
63. w Song, X., Menassa, C., Peña-Mora, F., and Conger, R. (2009). "Applying Insurance Pricing Models for Pricing Alternative Dispute Resolution as an Insurance Product." Accepted for publication and presentation at the Construction Research Congress (CRC), Seattle, WA, April 5-7, 2009.
64. w Chen, A. Y., Peña-Mora, F. (2009) "Collaborative GIS for Request of Construction Equipment in Disaster Response," ASCE International Workshop on Computing in Civil Engineering, Austin, TX, June 24-27, 2009.

65. w Peña-Mora, F., Ahn, C., Golparvar-Fard, M., Hajibabai, L., Shiftehfar, S., An, S., Aziz, Z., and Song, S.H. (2009) "A Framework for Managing Emissions during Construction", Proc., Int. Conference and Workshop on Sustainable Green Building Design and Construction, National Science Foundation, 2009.
66. w Golparvar-Fard, M., Savarese, S., and Peña-Mora, F. (2009) "Interactive Visual Construction Progress Monitoring with 4D Augmented Reality Model", Proc., Construction Research Congress, Seattle, WA, April 4-7, 2009.
67. w Roh S., Peña-Mora, F., Golparvar-Fard, M., and Han, S. (2009) "Visualization Application for Interior Progress Monitoring in 3D Environment", Proc., Construction Research Congress, Seattle, WA, April 5-7, 2009.
68. w Golparvar-Fard, M., Peña-Mora, F. and Savarese, S. (2009) "Sparse Reconstruction and Geo-Registration of Daily Site Photographs for Representation of As-Built Construction Scene and Automatic Construction Progress Data Collection", Proc., 2009 International Symposium on Automation and Robotics in Construction, Austin, TX, June 24-27, 2009.
69. w Golparvar-Fard, M., Peña-Mora F., and Savarese, S. (2009) "Monitoring of Construction Performance Using Daily Progress Photograph Logs and 4D As-Planned Models ", Proc., 2009 ASCE International Workshop on Computing in Civil Engineering, Austin, TX, June 24-27, 2009.
70. w Roh, S. and Peña-Mora, F. (2009), "3D Walk-through Environmental Model for Visualization of Interior Construction Progress Monitoring," The 3rd International Conference on Construction Engineering and Management (ICCEM) and the 6th International Conference on Construction Project Management (ICCPM), Jeju, Korea, May 27-30, 2009.
71. w Han, S., Peña-Mora, F., Golparvar-Fard, M., and Roh, S. (2009). "Application of a Visualization Technique for Safety Management," ASCE International Workshop on Computing in Civil Engineering, Austin, TX, June 24-27, 2009.
72. w Golparvar-Fard M., Peña-Mora, F., and Savarese S. (2009). "Automated model-based progress monitoring using unordered daily construction photographs and IFC as-planned models." Proc., 2009 Canadian Construction Research Forum, Banff, AB, Aug. 2009.
73. w Peña-Mora, F., Ahn, C., Golparvar-Fard, M., Hajibabai, L., Shiftehfar, S., An, S., Aziz, Z., and Song, X. (2009) "A Framework for Managing Emissions during Construction", International Conference and Workshop on Sustainable Green Building Design And Construction, Cairo, Egypt.
74. w Ahn, C., Rekapalli, P. V., Martinez, J. C., Peña-Mora, F. (2009) "Sustainability Analysis of Earthmoving Operations." Proceedings of the 41th Conference on Winter Simulation, Austin, TX, Dec 13, 2009.
75. w Ahn, C., Xie, H., Lee, S.H., Abourizk, S., and Peña-Mora, F. (2010) "Carbon Footprints Analysis for Tunnel Construction Processes in the Preplanning Phase Using Collaborative Simulation." Construction Research Congress 2010, Banff, AB, Canada, May 8, 2010.
76. w Song, X., Peña-Mora, F., and Arboleda, C. (2010), "The Calculation of Optimal Premium in Pricing ADR as an Insurance Product." The International Conference on Computing in Civil and Building Engineering (ICCCBE), and XVII European Group for Intelligent Computing in Engineering (EG-ICE) Workshop, Nottingham, UK, June 30-July 2, 2010.

77. w Song, X., Peña-Mora, F., and Arboleda, C. (2010). "The Application of Utility Theory In The Decision-Making Process for Investing In ADR Insurance," Innovation for Reshaping Construction Practice, Construction Research Congress, Banff Alberta, Canada, May 8-11, 2010.
78. w Han S., Lee, S., and Peña-Mora, F. (2010). "Framework for a Resilience System in Safety Management: A Simulation and Visualization Approach," The International Conference on Computing in Civil and Building Engineering (ICCCBE), and XVII European Group for Intelligent Computing in Engineering (EG-ICE) Workshop, Nottingham, UK, June 30-July 2, 2010.
79. w Han S., Lee, S., and Peña-Mora F. (2010). "System Dynamics Modeling of Safety Culture based on Resilience Engineering," Innovation for Reshaping Construction Practice, Construction Research Congress, Banff Alberta, Canada, May 8-11, 2010.
80. w Ahn, C., Rekapalli, P. V., Martinez, J. C., and Peña-Mora, F. (2009) "Sustainability Analysis of Earthmoving Operations." Proceedings of the 41th Conference on Winter Simulation, Austin, TX, Dec 13, 2009.
81. w Ahn, C., Pan, W., Lee, S.H., and Peña-Mora, F. (2010). "Enhanced Estimation of Air Emissions from Construction Operations Based on Discrete-Event Simulation." The International Conference on Computing in Civil and Building Engineering (ICCCBE) 2010, Nottingham, U.K., Jun 30-July 2, 2010.
82. w Peña-Mora, F., Ahn, C., Golparvar-Fard, M., Hajibabai, L., Shiftehfar, S., An, S., Aziz, Z., and Song, X. (2010) "A Framework for Managing Emissions during Construction", International Conference and Workshop on Sustainable Green Building Design And Construction, Cairo, Egypt, 2010.
83. w Ahn, C., Pan, W., Lee, S., and Peña-Mora, F. "Lessons Learned from Utilizing Discrete-Event Simulation Modeling for Quantifying Construction Emissions in Pre-Planning Phase." 2010 Winter Simulation Conference, Institute of Electrical and Electronics Engineers (IEEE), Piscataway, NJ. (Invited Paper), 2010.
84. w Chen, A. Y. and Peña-Mora, F. (2010), "Automation for Construction Equipment Request and Deployment for Emergency Response." The International Conference on Computing in Civil and Building Engineering (ICCCBE), and XVII European Group for Intelligent Computing in Engineering (EG-ICE) Workshop, Nottingham, UK, June 30-July 2, 2010.
85. w Chen, A. Y. and Peña-Mora, F. (2010), "A Heuristic Process Inspired by Foraging of Honeybees for Equipment Distribution in Disaster Response." The 6th International Conference on Innovation in Architecture, Engineering and Construction (ACE), State College, PA, June 9-11, 2010.
86. w Chen, A. Y. and Peña-Mora, F. (2010), "A GIS Approach to Construction Equipment Request and Deployment during Emergency Response." Innovation for Reshaping Construction Practice, Construction Research Congress, Banff Alberta, Canada, May 8-11, 2010.
87. w Chen, A. Y., Peña-Mora, F., Mehta, S. J., Plans, A. P., Brauer, B. R., Foltz, S., and Nacheman, S. (2010), "A GIS Approach to Equipment Allocation for Structural Stabilization and Civilian Rescue." The 7th International Conference on Information Systems for Crisis Response and Management (ISCRAM), Seattle, WA, May 2-5, 2010.
88. w Shiftehfar, R., Golparvar-Fard, M., Peña-Mora, F., Karahalios K., and Aziz, Z. (2010). "Application of Visualization for Construction Emission Monitoring." Proc., Construction Research Congress, Banff, Canada, May 8-11, 2010.

89. w Golparvar-Fard, M., Savarese, S. and Peña-Mora, F. (2010). "Automated Model Component-Based Recognition of Progress Using Daily Construction Photographs and 4D IFC-Based Models." Proc., Construction Research Congress, Banff, Canada, May 8-11, 2010.
90. w Golparvar-Fard, M., Savarese, S., and Peña-Mora, F. (2010). "Model-Based Detection of Progress Using D⁴AR - A 4 Dimensional Augmented Reality-Models Generated by Daily Site Photologs and Building Information Models." The International Conference on Computing in Civil and Building Engineering (ICCCBE), and XVII European Group for Intelligent Computing in Engineering (EG-ICE) Workshop, Nottingham, UK, June 30-July 2, 2010.
91. w Golparvar-Fard, M., Thomas J., Peña-Mora, F., and Savarese, S. (2010). Remote Assessment of Pre- and Post-Disaster Critical Physical Infrastructures Using Segway Mobile Workstation Chariot and D⁴AR – 4D Augmented Reality – Models." The International Conference on Computing in Civil and Building Engineering (ICCCBE), and XVII European Group for Intelligent Computing in Engineering (EG-ICE) Workshop, Nottingham, UK, June 30-July 2, 2010.
92. w Golparvar-Fard, M., Peña-Mora, F., and Savarese, S. (2010). "D⁴AR – 4 Dimensional Augmented Reality - Rools for Automated Remote Progress Tracking and Support of Decision-Enabling Tasks in the AEC/FM Industry." The 6th International Conference on Innovations in AEC Special Session - Transformative machine vision for AEC, State College, PA, June 9-11, 2010. (**Best Student Paper Award**).
93. w Ahn, C., Lee, S.H., and Peña-Mora, F. (2011). "The Opportunities and Challenges for Contractual Consideration of Construction-Related Carbon Emissions from Civil Infrastructure Projects." The Fourth International Conference on Construction Engineering and Project Management, Sydney, Australia, February 16-18, 2011.
94. w Song, X., Liang, W., Arboleda, C., Wang, S., and Peña-Mora, F. (2011), " Case Study of The National Stadium: Risks and Opportunities in China's PPP Implementation in Major Sports Facilities." The Fourth International Conference on Construction Engineering and Project Management, Sydney, Australia, February 16-18, 2011.
95. w Chen, A. Y. and Peña-Mora, F. (2011), "The Potential Use of a Public Web Service to Guide Converging Construction Equipment in Urban Search and Rescue." (Excellent Paper Award) The 4th International Conference on Construction Engineering and Project Management, Sydney, February 16-18, 2011.
96. w Ahn, C., Lee, S.H., and Peña-Mora, F. (2011). "Carbon Emissions Quantification and Verification Strategies for Large-scale Construction Projects." International Conference on Sustainable Design and Construction (ICSDC), Kansas City, Missouri, USA, March 23- 25, 2011.
97. w Song, X., Menassa, C., Arboleda, C.A., and Peña-Mora, F. (2011). "Analysis of Critical Parameters in the ADR Implementation Insurance Model." 2011 ASCE International Workshop on Computing in Civil Engineering, Miami, FL. June 19-22, 2011.
98. w Han, S., Lee, S., and Peña-Mora, F. (2011). Application of Dimension Reduction Techniques for Motion Recognition: Construction Worker Behavior Monitoring. 2011 ASCE International Workshop on Computing in Civil Engineering, Miami, FL, June 19-22, 2011.

99. w Chen, A. Y. and Peña-Mora, F. (2011), "Coordination of Converging Construction Equipments in Disaster Response." 2011 ASCE Workshop of Computing in Civil Engineering, Miami, FL, June, 19-22. 2011.
100. w Han, S., Lee, S., and Peña-Mora, F. (2012). Vision-based Motion Detection for Safety Behavior Analysis in Construction. Construction Research Congress (CRC) 2012, West Lafayette, IN, May 21-23, 2012.
101. w Song, X., and Peña-Mora, F. (2012) "Introducing the Concept of Emissions Liability Insurance in Managing Greenhouse Gas (GHG) Emissions and Promoting Sustainability in Construction Projects" Construction Research Congress (CRC) 2012, West Lafayette, IN, May 21-23, 2012.
102. w Ahn, C., Lee, S., and Peña-Mora, F. (2012) Monitoring System for Operational Efficiency and Environmental Performance of Construction Operations Using Vibration Signal Analysis. Construction Research Congress 2012: pp. 1879-1888. doi: 10.1061/9780784412329.189
103. w Golparvar-Fard, M., Dimitrov, A., and Peña-Mora, F. (2012). "Robust Material Recognition for Automated Semantically-Rich 3D Modeling." ISG*ISARC 2012, Eindhoven, The Netherlands, June 26-29, 2012.
104. w Han, S., Lee, S., and Peña-Mora, F. (2012). A Machine-Learning Classification Approach to Automatic Detection of Workers' Actions for Behavior-based Safety Analysis. 2012 ASCE International Workshop on Computing in Civil Engineering, Fl., June 17-20, 2012 (Best Conference Paper Award from the ASCE Visualization, Information Modeling, and Simulation (VIMS) Committee).
105. w Ahn, C., Lee, S., and Peña-Mora, F. (2013) Accelerometer-Based Measurement of Construction Equipment Operating Efficiency for Monitoring Environmental Performance. 2013 ASCE International Workshop on Computing in Civil Engineering, June 23-25, 2013, University of Southern California, Los Angeles, CA, USA
106. w Lu, Z., Peña-Mora, F., Wang, X., and Shen, Q. (2015) Social Impact Project Finance: an innovative and sustainable infrastructure financing framework. 2015 Creative Construction Conference, June 21-24, 2015, Krakow, Poland
107. w Riaz, Z., Arslan, M., and Peña-Mora, F., (2015) "Challenges in Data Management When Monitoring Confined Spaces Using BIM and Wireless Sensor Technology" Computing in Civil Engineering 2015: pp. 123-130.
108. w Shen, C., Riaz, Z., Palle, M., Jin, Q., and Peña-Mora, F., (2015) "Open Data Landscape: A Global Perspective and a Focus on China" Open and Big Data Management and Innovation Volume 9373 of the series Lecture Notes in Computer Science pp 247-260
109. Lu, Z, Peña-Mora, F, Wang, XR, Shen, CQ, and Riaz, Z (2015) "Social impact project finance: An innovative and sustainable infrastructure financing framework"- Procedia Engineering, 2015 Volume 123, 2015, pp 300–307

- 110.w Aldunate R.G., Pena-Mora F., Nussbaum M., Valenzuela A., Navarro C. (2016) Self-organizing Connectivity for Mobile Agents in Dynamical Environments. In: García C., Caballero-Gil P., Burmester M., Quesada-Arencibia A. (eds) Ubiquitous Computing and Ambient Intelligence. UCAmI 2016. Lecture Notes in Computer Science, vol 10070. Springer, Cham
- 111.w X Song, R Qiu, C Shen, F Peña-Mora (2016) “Resource Conflict Identification-Resolution-Based Construction Temporary Facilities Layout Framework in a Dam Construction Project” Proceedings of the Tenth International Conference on Management Science and Engineering Management Volume 502 of the series Advances in Intelligent Systems and Computing, pp 1427-1437
- 112.w X Song, C Shen, L Zhong, F Pena-Mora (2017) “SEM-Based Value Generation Mechanism from Open Government Data in Environment/Weather Sector” International Conference on Management Science and Engineering Management, Lecture Notes on Multidisciplinary Industrial Engineering, Springer, Cham, pp. 351-366

Invited Lecturers

February 1993, "Design Rationale for Computer Supported Collaborative Engineering," Department of Computer Science, Worcester Polytechnic Institute, Worcester, MA.

October 1994, Plenary Presenter, “SHARED-DRIMS,” Thirteenth Annual Conference of Ford Foundation Fellows, Washington, DC.

October 1994, “Da Vinci Agent Society Initiative,” Electric Boat Corporation, Connecticut.

April 1995, "Design Rationale for Computer Supported Conflict Mitigation," Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Fourth Annual Northeastern U.S. Chapter Meeting, Cornell University, Ithaca, NY.

July 1995, “Da Vinci Agent Society Initiative,” Intergraph Corporation, Alabama.

July 1995, "Computer Models for Engineering Systems," Centro de Innovación Tecnológica, Departamento de Informática, Universidad Nacional de Cuyo, Mendoza, Argentina.

July 1995, "Role of Information Technology in the Future of the Province of Mendoza," Centro de Innovación Tecnológica, Facultad de Ciencias Económicas, Universidad Nacional de Cuyo, Mendoza, Argentina.

July 1995, "Role of Information Technology in the Future of the Province of Rio Negro," Instituto Balseiro, Bariloche, Rio Negro, Argentina.

July 1995, "Computer Supported Collaborative Engineering," Departamento de Ingeniería de Sistemas y Computación, Universidad de los Andes, Santa Fe de Bogotá, Colombia; also at the Centro de Investigaciones Tecnológicas, Mendoza, Argentina, and IMPSA, Mendoza, Argentina.

October 1995, "Design Rationale for Computer Supported Change Management," Fourteenth Annual Conference of Ford Foundation Fellows, Washington, DC.

June 1996, Keynote Speaker for the Panel 96 - XXII Conferencia Latino Americana de Informática, Bogotá, D.C., Colombia with the presentation "Artificial Intelligence in Engineering."

July 1996, "Da Vinci Agent Society Initiative," Kajima Corporation, Tokyo, Japan; also at Shimizu Corporation, Tokyo, Japan, Kawasaki Corporation, Japan, Fujitsu Corporation, Japan, and NEC Corporation, Japan.

April 1997, "Da Vinci Agent Society Initiative," Argonne National Laboratory, IL.

April 1997, "SCHEREC," Primavera Corporation, Bala Cynwyd, PA.

June 1997, "Project Management Integrating Cost and Schedule," Professional Session, New England Plant Engineering and Maintenance Conference, Boston, MA.

July 1997, "Collaborative Negotiation Methodology", NSF Program Directors.

April 1998, "Collaborative Negotiation Methodology," Civil Engineering Program, George Mason University.

July 1998, "Collaborative Negotiation for Large Scale Civil Engineering Projects," International Meeting on Artificial Intelligence in Structural Engineering, Ascona, Switzerland.

February 1999, "IT-Enabled Construction Offices," Keynote Speaker at the Japanese Conference on Productivity in Construction, Tokyo, Japan.

May 1999, "Collaborative Learning Environments," Keynote Speaker on the 1999 Distance Learning Symposium at the Universidad Católica de Chile, Santiago, Chile.

August 1999, "Collaborative Learning Environments," School of Architecture at the University of Sydney, Sydney, Australia.

August 1999, "IT-Enabled Construction Offices," Civil Engineering Department, University of Sydney, Sydney, Australia.

July 2000, "Interactive Collaborative Environments," Kajima Corporation, Japan.

July 2000, "Mobile Collaboration," Osaka Gankien University, Osaka, Japan.

February 2001, "Interactive Collaborative Environments," Caterpillar Lecture, University of Iowa, Sponsored by the Departments of Civil and Environmental Engineering and the Department of Mechanical Engineering.

March 2002, "Dynamic Project Management for Civil Infrastructure Systems," NAE Frontiers of Engineering, Irvine, CA.

April 2002, "C3: Collaboration, Change and Conflict," New York Transit Authority, New York City, NY.

March 2003, "Collaboration during Disasters," University of California at Berkeley, Berkeley, California, and Stanford University, Stanford, CA.

November 2003, "DARE: Disaster Aware/Resistant Critical Infrastructure - Collaboration Perspective," Keynote Speech at the ASCE 2003 Convention, Information Technology in Civil Engineering Conference, Nashville, TN.

January 2004, "Conflict Resolution in Large-Scale Civil Engineering Infrastructure Projects," Malaysia University of Science and Technology, Kuala Lumpur, Malaysia.

January 2004, "Interdisciplinary Research in DARE: Disaster Aware/Resistant Critical Infrastructure," National Academies Convocation on Facilitating Interdisciplinary Research, Washington, DC.

June 2004, "Collaborative First Response to Disasters Involving Critical Physical Infrastructure: Drawing from Robust Natural Systems," University of Loughborough, England; Malaysia University of Science and Technology (MUST), Malaysia; National University of Singapore (NUS), Singapore. Hong Kong University of Science and Technology (HKUST), Hong Kong.

January 2005, "Collaborative First response to Disasters Involving Critical Physical Infrastructure: Drawing from Robust Natural Systems," University of Tokyo, Tokyo; Japan.

September 2005, "CP2R: Collaboration for Preparedness, Response and Recovery during Disaster," Dean's Distinguished Lecture, Rice University.

June and July 2006, "Collaborative Disasters Response Involving Critical Physical Infrastructure," University of Loughborough, England; EPFL, Lausanne, Switzerland.

December 2007 and January 2008, "D⁴AR: Fourth Dimensional Augmented Reality for Construction Progress Monitoring," Tsinghua University, Huazhong University of Science and Technology, Tongji University, China.

November 2010, "D⁴AR - 4 Dimensional Augmented Reality - Models for Automation and Interactive Visualization of Construction Progress Monitoring," Keynote Speech at the CONVR2010 Convention, Sendai, Japan.

November 2010, "Interactive Visualization and Automation of Construction Progress Monitoring with D⁴ AR - 4 Dimensional Augmented Reality - Models," Keynote Speech at the CIB W78, Cairo, Egypt.

February 2011, "D⁴AR - 4D Augmented Reality – Models for Automation and Interactive Visualization of Construction Progress Monitoring," Keynote Speech at the 4th International Conference on Construction Engineering and Project Management, Sydney, Australia.

March 2012, "D⁴AR- 4D Augmented Reality: Visualization of Construction Progress Monitoring," Invited Speaker at North Carolina State University, Raleigh, NC.

April 2012, "An Action Agenda for the Future of Engineering Education in North America," XXXIII UPADI Convention in Havana, Cuba.

June 2013, "nD BIM+AR: n-Dimensional Building Information and Augmented Reality Models for Automated Construction Performance Monitoring" ASCE International Workshop on Computing in Civil Engineering, University of Southern California, Los Angeles, CA, USA

2014-2016, "One Growing Sustainable Resilient and Healthy NYC" different versions to different organizations throughout the USA, China, UK, Brazil, Panama, Hong Kong, and Dominican Republic

November 2016, "Nueva York (NYC) 80x50" II Congreso Internacional de Colegio Dominicano de Ingenieros, Arquitectos y Agrimensores (CODIA) (Dominican College of Engineers, Architects and Surveyors)

September 2016, “OneNYC: Design and Construction Excellence 2.0 Guiding Principles” Colegio Oficial de Arquitectos de Madrid (COAM) (Official College of Architects of Madrid) XIII SEMANA DE LA ARQUITECTURA (Architecture Week)

June-September 2017, “Design and Construction Excellence 2.0” different versions to different organizations throughout China.

October 2017, “OneNYC Build to Last” Keynote, Seminario Internacional de Innovación en la Construcción, Bogotá, Colombia

a. **Other** (*patents, bulletins and reports, magazine articles, etc.*)

Patents and Patent Applications Pending:

1. Hussein, K. and Peña-Mora, F., “Collaborative Agent Interaction Control and Synchronization System,” MIT Case No. 8376S, Daly, Crowley & Mofford, LLP file MIT-057AUS, US Patent Application No. 09/540,947, Issued February 28, 2006.
2. Peña-Mora, F. and Kuang, C., “Mechanisms and Artifacts to Manage Heterogeneous Platform Interfaces in a Collaboration,” MIT Case No. 9249S, Daly, Crowley & Mofford, LLP file MIT-057BUS, US Patent Application No. 10/069,885, Issued January 9, 2007.
3. Peña-Mora, F., Vadhavkar, S., Dwivedi, G., Kuang, C., and Wang, W., “Software Service Handoff Mechanism with A Performance Reliability Improvement Mechanism (PRIM) for a Collaborative Client-Server System,” MIT Case No. 9250S, Daly, Crowley & Mofford, LLP file MIT-092AUS, US Patent Application No. 10/069,797, Issued May 15, 2007.
4. Peña-Mora, F., Park, M., Lee, S., Fulenwider, M., and Li, M. “Dynamic Planning Method and System,” MIT Case No. 9185S, Daly, Crowley & Mofford, LLP file MIT-086AUS, US Patent Application No. 10/068,119, US Patent No. 7,349,863, Issued March 25, 2008.
5. Peña-Mora, F., Park, M., Lee, S., Fulenwider, M., and Li, M. “Reliability Buffering Technique Applied to a Project Planning Model,” MIT Case No. 9186S, Daly, Crowley & Mofford, LLP file MIT-087PUSP, US Patent No. 7,415,393, Issued August 19, 2008.
6. Golparvar-Fard M., Peña-Mora, F., and Savarese, S. “Four-Dimensional Augmented Reality Models for Interactive Visualization and Automated Construction Progress Monitoring.” University of Illinois Case, Brinks, Hofer, Gilson, & Lione Attorney Docket No. 30831.15 (L0014), US Patent No. 9,070,216, Issued June 30, 2015.
7. Thomas J., Peña-Mora, F., and Golparvar-Fard, M. (2009). “Mobile Workstation Chariot.” Provisional Patent, U. S. Patent and Trademark Office (Docket Number: TF08208-PRO).

Internal Memoranda and Progress Reports

1. s Logcher, R., and Peña-Mora, F. "Phase I Report on Cooperative Research on Construction Production Monitoring and Control," **IESL Report No. 90-04**, Intelligent Engineering Systems Laboratory, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, August, 1990.

2. w Peña-Mora, F. and Leroux, R., "Unexplored Aspects in SCHEREC, an Intelligent Schedule Recovery," **IESL Report No. 93-26**, Intelligent Engineering Systems Laboratory, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, August, 1993.
3. w Peña-Mora, F. and Brunet, F., "Connection of SCHEREC with Commercial Cost Databases and Scheduling Programs," **IESL Report No. 95-04**, Intelligent Engineering Systems Laboratory, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, May, 1995.
4. w Peña-Mora, F. and Ooi, C., "Machine Learning Applications in Civil Engineering," **IESL Report No. 95-05**, Intelligent Engineering Systems Laboratory, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, May, 1995.
5. w Peña-Mora, F. and Rodriguez, S., "Review of Qualitative Reasoning, Neural Networks, and Genetic Algorithms for Large Scale Engineering Negotiations," **IESL Report No. 95-06**, Intelligent Engineering Systems Laboratory, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, September, 1995.
6. w Peña-Mora, F., Ali-Ahmad, W., Chen, H., Hussein, K., Kennedy, J., Soibelman, L., and Vadhavkar, S., "The Da Vinci Agent Society Initiative Progress Report as Fall 1996", **IESL Report No. 96-06**, Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, November, 1996.
7. w Peña-Mora, F. and Vadhavkar, S. "Design Rationale and Design Patterns in Reusable Software Design," **IESL Report No. 96-07**, Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, November, 1996.
8. w Peña-Mora, F. and Hussein, K. "Towards an Effective Distributed Collaborative Design Meeting Environment," **IESL Report No. 96-08**, Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, November, 1996.
9. w Peña-Mora, F. and Soibelman, L. "A Meta-Representation for Design Change Negotiation on Large Scale Engineering Systems in a Geographically Distributed Multi-Reasoning Mechanism," **IESL Report No. 96-09**, Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, November, 1996.
10. w Peña-Mora, F. and Soibelman, L. "Machine-Learning Algorithms and Reasoning Mechanisms Applications for Change Negotiation in Large Scale Construction Projects," **IESL Report No. 96-10**, Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, November, 1996.
11. w Peña-Mora, F., Vadhavkar, S., and Dirisala, S., "Towards A Computer-Based Assistant for Reusable Software Design," **IESL Report No. 97-16**, Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, November, 1997.
12. w Peña-Mora, F. and Chiou, Y., "Schedule Analysis and Recovery that Integrates Physical Representation of a Product with its Cost Information **IESL Report No. 98-3**, Intelligent Engineering Systems Laboratory,

Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, January, 1998.

13. w Peña-Mora, F. and Soibelman, L., “Distributed Multi-Reasoning Mechanisms for the Design of Large-Scale Engineering Systems,” **IESL Report No. 98-9**, Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, June, 1998.
14. w Peña-Mora, F. and Wang, W., “QoS for Interactive Collaborative Applications on a Dynamic Wireless Network,” **IESL Report No. 01-5**, Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, June, 1998.
15. w Peña-Mora, F. and Fu, L. “Adaptation of the CAIRO Distributed Meeting Environment towards Military Collaboration Efforts,” **IESL Report No. 99-7** Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, May, 1999.
16. w Peña-Mora, F. and Mills, J. “Component-Based Architecture for Online Collaborative Mission Planning Environments,” **IESL Report No. 00-5** Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, May, 2000.
17. w Peña-Mora, F. and Kuang, C. “Interactive Collaborative Environments,” **IESL Report No. 01-6** Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, January, 2001.
18. w Peña-Mora, F. and Dwivedi, G. “Multiple Device Collaborative Environments,” **IESL Report No. 01-7** Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, January, 2001.
19. w Peña-Mora, F. and Vadahvakar, S. “Interaction Space,” **IESL Report No. 01-11** Intelligent Engineering Systems Laboratory, Engineering System Group, Henry L. Pierce Laboratory, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, July, 2001.

2. Grants, contracts and gifts received for your research and teaching

a. For Research

Years (Inclusive)	Brief Title or Description	Source of Funds	Total Funding	Funding Allocated to this Professor	# of PI's & Lead PI if not this Professor
1995-96	Design Rationale for Software Reusability	Draper Laboratory	\$58,000	\$58,000	1
1995-97	Game, Bargaining, and Contract Theories for Mendoza Collaborative Design	Province of Mendoza	\$80,000	\$80,000	1

1995-02	Collaboration/Meeting Models for Negotiation Management on the World Wide Web	Kajima Corporation	\$280,000	\$280,000	1
1995-98	Change Management for Sloan Fund Computer Supported Design/Construction	Sloan Fund	\$50,000	\$50,000	1
1995-00	Information Technology Support for Managing Change, Cost, and Schedule	Central Artery	\$360,000	\$360,000	1
1996-97	Theoretical Foundations National Science for Computer-Supported Collaborative-Competitive and Domain-Dependent Negotiation in Large-Scale Engineering Systems	National Science Foundation	\$18,000	\$18,000	1
1996-99	U.S. - Mexico Cooperative Research in Collaborative Design Meeting Environments and Intelligent Agents Representatives	National Science Foundation	\$120,000	\$120,000	1
1997-98	Scheduling Recovery Strategies	Shimizu Corporation	\$40,000	\$40,000	1
1997-00	IT-Based Coordination of Multiple Construction Contracts	Tren Urbana	\$226,092	\$226,092	1
1998-98	Design, Monitoring, and Maintenance for Sustainable Sustainability Civil Infrastructure - Breaking the Infrastructure Cost Spiral	Alliance for Global Sustainability	\$30,000	\$30,000	1
1998-02	Robust Planning	Barrington Consulting/ TDRC Intec	\$200,000	\$200,000	1
1998-01	A Systematic Repository of Conflict Management Expertise for Collaborative Design	National Science Foundation	\$210,000	\$100,000	3, Mark Klein
1999-02	Collaborative Engineering for Rescue Mission Planning	Draper Laboratory	\$186,000	\$186,000	1
1999-00	Electronic Transactions for Collaborative Enterprises	Pen-Op	\$50,000	\$50,000	1
1999-02	Geographically Distributed Team Support	Ford Motor Co.	\$212,000	\$212,000	1
1999-04	Collaborative Negotiation Methodology for Large-Scale Civil Infrastructure Projects	National Science Foundation CAREER- PECASE	\$516,000	\$516,000	1
1999-02	Collaborative Environments for Education	Microsoft	\$150,000	\$150,000	1

2002-03	Global Prototype Bill of Materials Change Management	Ford Motor Company	\$75,000	\$75,000	1
2003-06	Dynamic Planning and Control National Science Methodology (DPM) for Large Scale Concurrent Design and Construction Project	National Science Foundation	\$397,521	\$260,000	4
2003-04	Automated Productivity Measurements For Excavations in Large Construction Projects	Motorola-MIT	\$238,000	\$238,000	1
2004-09	ITR: IT-based Collaboration Framework for Preparing Foundation Against, Responding to and Recovering from Disasters Involving Critical Physical Infrastructures	National Science Foundation	\$2,370,000	\$1,260,000	10
2005-06	NSF CAREER Workshop at the 2005 Construction Research Congress (CRC); April 5-6, 2005; San Diego, CA	National Science Foundation	\$44,339	\$35,000	3
2005-06	SGER: Collaborative Research: Mapping and Analyzing Emergent Multiorganizational Networks in the Hurricane Katrina Response	National Science Foundation	\$71,885	\$35,000	2, Nosh Contractor
2005-06	GroupScope	NCSA	\$82,500	\$15,000	5, Nosh Contractor
2007-08	Workshop on Key Research and Education Issues in Construction Engineering and Management for the 2010	National Science Foundation	\$40,000	\$40,000	3
2007-09	Integrated Conflict Claim and Dispute Avoidance Mitigation and Resolution Methodology	National Science Foundation	\$134,000	\$110,000	3
2007-09	CRI:IAD - A Pressing Need for Observation Facilitation and Computer Support of Group Interactions for Advancing United States National Priorities-Homeland Security and Economic Prosperity	National Science Foundation	\$100,000	\$80,000	4
2008-11	Interactive Ubiquitous Visualization of Construction Progress Monitoring with D ⁴ AR (4 Dimensional Augmented Reality) Models	National Science Foundation	\$340,000	\$300,000	1
2007-11	CRI:IAD-A Pressing Need for Observation, Facilitation and Computer Support of Group for Advancing United States National Priorities-Homeland Security and Economic Prosperity	National Science Foundation	\$100,000	\$100,000	1

2007-11	Collaborative Research: Integrated Conflict Claim and Dispute Avoidance Mitigation and Resolution Methodology for Large-Scale Design and Construction Projects (C2D)	National Science Foundation	\$299,998	\$299,998	1
2010-13	Collaborative Research: SES 98-1320: Innovation Personnel and their Ecosystem: Career Choices and Trajectories of Scientists-Industry or University and Basic or Applied?	National Science Foundation	\$45,189	\$45,189	1
2010-14	CDI-Type II: Collaborative Research: Groupscope-Instrumenting Research on Interaction Networks in Complex Social Contexts	National Science Foundation	\$1,687,482	\$337,500	5, Scott Poole
2012-15	Collaborative Research: Automatic Behavior Monitoring for In-Depth Analysis of Construction Fatalities and Injuries	National Science Foundation	\$68,328	\$68,328	1
2013-14	Sustainable Urbanization	Sanjian Nantong No.3	\$100,000	\$100,000	1
2015-16	Open Data for Sustainable Urbanization (ODSU)	HE Family	\$100,000	\$100,000	1
2016-17	Data Science and Information Technology for Sustainable Urbanization (DSITSU)	ZHAO Fund	\$100,000	\$100,000	1

b. **For Instruction**

Years (Inclusive)	Brief Title or Description	Source of Funds	Total Funding	Funding Allocated to this Professor	# of PI's & Lead PI if not this Professor
1996-97	Software Reusability PEER	PEER	\$25,000	\$25,000	1
1996-98	Evaluation of Collaborative -Distributed Education	ECSEL	\$12,000	\$6,000	

1997-98	Collaboration in Australian Construction Education	Marion and Jasper Whiting Foundation	\$4,265	\$4,265	1
1997-00	Cooperative Electronic Ferry Fund Research Laboratory and Learning Environment	Ferry Fund	\$50,000	\$50,000	1
1998-99	"Campus-Aware," Cordell Hull "IT-Enabled," Collaboration in Large-Scale Infrastructure Projects	Distributed Learning for Cordell Hull	\$38,000	\$38,000	1

7. Areas of Research

Construction Management; Project Management; Collaboration; Change Management; Conflict Resolution; Support Systems for the Development of Large-Scale Engineering/Civil Infrastructure Projects

Information Technology Support for Collaboration in Preparedness, Response, and Recovery during Disasters Involving Critical Physical Infrastructures

Intelligent and Integrated Sustainable Construction and Sustainable Urbanization

4. Graduate Thesis Research Advising

Summary

	<u>Total</u>	<u>Completed</u>	<u>In Progress</u>
Master of Engineering	30	30	0
Master of Science	31	31	0

Doctoral

As Supervisor	21	13	8
As Reader	18	18	0

Master of Engineering Theses

1. Guzman, Joel, M.E., 1997, "Interactive Database of Preliminary Assessment Score Sheets for Cross-Site Comparison," now in Information Technology consulting.
2. Kuo, Kai, M.E., 1997, "Web-based Database-Enabled Executive Information System for Preliminary Site Assessment under CERCLA," now in Information Technology consulting.
3. Lukasiak, Anna, M.E., 1997, "Internet-Enabled Integrated Presentation System for Site Remediation Preliminary Assessment," now with Goldman Sachs.
4. Mukhopadhyay, Samrat, M.E., 1997, "Development of Data Store Search Engine for Surface Water Pathway Criteria List," now in Information Technology consulting.
5. Benjamin, Kareem, M.E., 1998, "Control Strategies for Distributed Meeting Environments," now with Oracle Corporation.
6. Su, Christine, M.E., 1998, "Design Framework for Distributed Software Development," now in Information Technology consulting.
7. Yang, Robert, M.E., 1998, "Managing a Distributed Software Engineering Team," now in Information Technology consulting.

8. Huang, Emilie, M.E., 1998, "Collaboration Framework for Environmental Conflict Resolution," now in Environmental Engineering consulting.
9. Njendu, Charles, M.E., 1998, "Quality Assurance Framework for Distributed Collaborative Software Development," now in Information Technology consulting.
10. Chen, Emily, M.E., 1999, "Collaborative Environmental Engineering," now in Environmental Engineering consulting.
11. Fu, Luke, M.E., 1999, "Collaborative Rescue Mission Planning," now in Information Technology consulting.
12. Hor, Joon, M.E., 1999, "Casual Contact Representation in Electronic Distributed Environments," now in Information Technology consulting.
13. Kuyumcu, Caglan, M.E., 1999, "Configuration Management for Distributed Development," now in general construction in Turkey.
14. Landel, Gregoire, M.E., 1999, "IT Support for Collaborative Discourse on Environmental Clean-up," now a PhD student at Columbia University.
15. Cruz, Gregorio, M.E., 1999, "Quality Assurance in Geographically Distributed Software Development," now in Information Technology consulting.
16. Manasseh, Christian, M.E., 1999, "Project Management Support for Distributed Teams," now a PhD student at the University of California at Berkeley.
17. Abbott, Erik, M.E., 2000, "Intelligent Electronic Collaboration: a Business Case," now in Information Technology consulting.
18. El-Solh, Wassim, M.E., 2000, "Collaborative Design Process," now in Information Technology consulting.
19. Gemayel, Kaissor, M.E., 2000, "Enhancing Collaboration through Application Service," now in Information Technology consulting.
20. Kamili, Meimawan, M.E., 2000, "Collaborative Graphical User Interface Design," now in Information Technology consulting.
21. Kim, Sawyoon, M.E., 2000, "Quality Assurance in a Distributed Software Development Collaboration," now in Information Technology consulting.
22. Kyauk, Steven, M.E., 2000, "Intelligent Electronic Collaboration: a Technology Case," now in Information Technology consulting.
23. Liminsky, Ivan, M.E., 2000, "Collaborative Application Servers," now in Information Technology consulting.
24. Liu, Teresa, M.E., 2000, "Configuration Management for a Distributed and Collaborative Software Development Environment," now in Information Technology consulting.
25. Ma, Kenward, M.E., 2000, "Testing in a Collaborative Software Environment," now in Information Technology consulting.
26. Ng, Yu Lung, M.E., 2000, "Requirement Analysis for Distributed Software Development," now in Information Technology consulting.
27. Tan, Nhi, M.E., 2000, "Software Reusability in Collaborative Engineering Environments," now in Information Technology consulting.
28. Wong, Koon-Po, M.E., 2000, "Transaction Management on Collaborative Application Services," now in Information Technology consulting.
29. Mizunu, Yusuke, M.E., 2001, "Collaboration under Stressful Situations: Disaster Relief," now a Research Principal at the University of Tokyo, Japan.
30. Kuo, Pei-Jeng, M.E., 2001, "Next Generation Mobile Interactive Collaboration Environments," now in Information Technology consulting.

Master of Science Theses

1. Hussein, Karim, M.S., 1995, "Communication Facilitators for Distributed Collaborative Engineering Environment," now Vice-President at WebMD, a subsidiary of Emdeon Corporation.

2. Kennedy, James, M.S., 1997, "Computer Supported Negotiation and Dispute Resolution in the Large Scale Civil Engineering and Construction," now Vice-President at JP Morgan Fleming Asset Management.
3. Chen, Hong, M.S., 1997, "Web Based Project Management System," now in Information Technology consulting.
4. Vadhavkar, Sanjeev, M.S., 1997, "Augmenting Design Patterns with Design Rationale," now Vice-President at Merrill Lynch.
5. Chiou, Yee-Sue, M.S., 1998, "SCHEREC Project Management System," now in Information Technology consulting.
6. Dirisala, Siva Kumar, M.S., 1998, "DRIMER Software Reusability Methodology," now with Oracle Corporation.
7. Kwok, Szeyiu Gordon, M.S., 1999, "Effect of Globalization in Contract Negotiations," now with Oracle Corporation.
8. Harpoth, Nina, M.S., 1999, "Contract Negotiations," now with Turner Construction.
9. Li, Michael, M.S., 1999, "Integrated Project Control Methodology with Axiomatic Design Principles," now with Turner Construction.
10. Sosa Carlos, M.S., 1999, "Dispute Avoidance and Resolution in Large Scale Civil Engineering Systems," now President, Area-Azul Corporation in Venezuela.
11. Tamaki, Tadatsugu, M.S., 1999, "Relationship between Project Delivery Method and Contract Negotiation Methodologies," now a Project Manager in Kajima Corporation, Japan.
12. Park, Moonseo, M.S., 1999, "Cost Considerations in Robust Planning," now an Assistant Professor in Seoul National University, South Korea.
13. Li, Tong, M.S., 2000, "Web Integrated project Management System for Tren Urbano," now in Information Technology consulting.
14. Sutar, Ajit, M.S., 2000, "Theoretical Foundations of Robust Planning," now in Information Technology consulting.
15. Choudary, Kiran, M.S., 2000, "IT Enabled Construction Office," now with Oracle Corporation.
16. Tanaka, Shunkensen, M.S., 2000, M.S., 2000, "Partnering Effect in Collaborative Engineering in Construction Projects," now a Project Manager in Kajima Corporation, Japan.
17. Vedam, Padmanabha, M.S., 2000, "Interactions Protocol for Collaborative Engineering," now with Oracle Corporation.
18. Solari, Jaime, M.S., 2000, "Collaborative Application Service Provider Model in a Collaborative Environment," now in Information Technology consulting.
19. Olivier, Rodolphe, M.S., 2000, "Use of IT in Large-Scale Engineering Projects," now in general contracting in France.
20. Kuang, Chang, M.S., 2001, "Team Oriented Surveys for Collaborative Environments," now with Oracle Corporation.
21. Karapidakis, Sofoklis, M.S., 2001, "System and Project Management in a Global Environment," now in Information Technology consulting in Germany.
22. Dwivedi, Gyanesh, M.S., 2001, "Internet-Based Dynamic Planning System," now with Oracle Corporation.
23. Sen, Sugata, M.S., 2001, "Framework of Best Practices for Collaboration in Geographically Distributed Teams," now a PhD student at MIT.
24. McCone, Sean, M.S., 2002, "Construction Conflict Resolution Strategies," now in general contracting.
25. Fulenwider, Margaret, M.S., 2002, "Dynamic Planning and Control for Large-Scale Infrastructure Projects: Route 3N as a Case Study," now Senior Consultant at CRA International, formerly Charles River Associates International.
26. Wei, Wang, M.S., 2002, "Mobile Environments for Geographically Distributed Teams," now in Information Technology consulting.
27. Kalligeros, Konstantinos, M.S., 2002, "Global Project Management: Planning and Learning," now a PhD student at MIT.

28. Lee, Sang Hyun, M.S., 2003, “Mobile, Interactive, Collaborative Dynamic Planning Methodology,” now an Assistant Professor at University of Alberta.
29. Craig, Mathias, M.S., 2003, “Autonomous Vehicle Self-Organization in Unstable, Hostile, and Chaotic Environments,” now President of BlueEnergy Corporation.
30. Majidi, Naz, M.S., 2003, “Conflict Profile for Large-Scale Infrastructure Projects,” now with Goldman Sachs.
31. Mathur, Shobhit, 2008, “IT Framework to Study Large Group Interaction and Dynamics”, now with Group One Trading.

Doctoral Theses, Supervisor Ph.D. Degrees Granted 13

1. **Hussein, Karim, Ph.D.**, 1998, MIT, “Towards an Effective Distributed Collaborative Design Meeting Environment,” now *Chief Executive Officer at D-Kimia Diagnostic Solutions*.
2. **Soibelman, Lucio, Ph.D.**, 1998, MIT, “A Meta-Representation for Design Change Negotiation on Large Scale Engineering Systems in a Geographically Distributed Multi-Reasoning Mechanism,” now *Professor and Department Chair at the University of Southern California (USC)*.
3. **Vadhavkar, Sanjeev, Ph.D.**, 2001, MIT, “Conflict Mitigation in Collaborative Development,” now *Director at Merrill Lynch*.
4. **Park, Moonseo, Ph.D.**, 2001, MIT, “Robust Planning and Management of Large-Scale Engineering Projects,” now *Professor at the Seoul National University, South Korea*.
5. **Lee, SangHyun, Ph.D.**, 2006, MIT, “Dynamic Planning and Control Methodology: Understanding and Managing Errors and Changes in Concurrent Design and Construction Projects,” now *Associate Professor & John L. Tishman CM Faculty Scholar at the University of Michigan, Ann Arbor*.
6. **Han, Sangwon, Ph.D.**, 2008, UIUC, “Integrated Control Framework for Managing Non-Value Adding Activities in Design and Construction Projects,” now *Assistant Professor at the University of Seoul, South Korea*.
7. **Menassa, Carol, Ph.D.**, 2009, UIUC, “Quantitative Framework to Evaluate Alternative Dispute Resolution Investments in Architecture Engineering and Construction Projects Using Option and Real Option Theory,” now *Assistant Professor & John L. Tishman CM Faculty Scholar at the University of Michigan, Ann Arbor*.
8. **Golparvar-Fard, Mani, Ph.D.**, 2010, UIUC, “D⁴AR (4D augmented reality) Models for Automation and Interactive Visualization Construction Progress Monitoring,” now *Assistant Professor and Faculty Entrepreneurial Fellow at the University of Illinois, Urbana-Champaign*.
9. **Chen, Albert Y., Ph.D.**, 2011, UIUC, “Heavy Equipment Distribution Framework for Urban Search and Rescue Operations and Critical Infrastructure Systems Restoration in Disaster Response,” now *Assistant Professor at National Taiwan University, Taiwan*.
10. **Ahn, Changbum, Ph.D.**, 2012, UIUC, “A Framework to Manage and Improve Operational Efficiency and Environmental Performance of Construction Operations,” now *Assistant Professor at the University of Nebraska–Lincoln*.
11. **Song, Xinyi, Ph.D.**, 2012, Columbia University, “Application of Insurance Policies in Construction Claim and Dispute Resolution,” now *Assistant Professor at Georgia Tech*.
12. **Han, SangUk, Ph.D.**, 2013, UIUC, “Automatic Monitoring and Systemic Analysis of Worker’s Safety Behavior in Construction Operations,” now *Assistant Professor at the University of Alberta*.
13. **Liu, Muqing, Ph.D.**, 2015, Columbia University, “Urban Transport Project Prioritization Strategy in Developing Countries: A Scenario-Based Multi-Criteria Decision Analysis Perspective,” now *at China Construction America*.

Doctoral Theses, Supervisor Ph.D. Students Supervised at Present: 8

1. Lu, Zheng, “Innovative Financing Methods for Sustainable Urbanization” Expected December 2017, Columbia University.

2. Wen, Huey-Wei, "Beyond Regulations: Resiliency the new Social Responsibility," June 2019, (co-supervisor with Prof. DongPing Fang), Tsinghua University, China
3. Wang, Yue, "Infrastructure Investment Evaluation Based on City Amenity Theory," June 2020, (co-supervisor with Prof. Binglian Liu), Tsinghua University, China
4. Sai, Xu, "Community Capital as an Evaluation of Infrastructure Investment," June 2020, (co-supervisor with Prof. Binglian Liu), Tsinghua University, China
5. Mao, Quan, "Designing Resilient Infrastructure System of Systems," June 2020, (co-supervisor with Prof. Nan Li), Tsinghua University, China
6. Fang, Weeli, "Vision-based recognition of worker's unsafe behavior in construction," June 2020, (co-supervisor with Prof. Hanbin Luo), Huazhong University of Science and Technology, China
7. Shen, LeiLei, "Volume measurement based on point cloud acquired on construction site for material control," June 2020, (co-supervisor with Prof. Hanbin Luo), Huazhong University of Science and Technology, China
8. Huang, Yao, "Assessment and improvement of BIM performance of construction firm using benchmarking approach" June 2020, (co-supervisor with Prof. Shi Qian), Tongji University, China

Doctoral Theses, Reader

1. Licea, Guillermo, "Pattern Systems for Distributed Software Development," December 1999, Prof. Jesus Favela (Chair), CICESE, Mexico.
2. Chi, Jeffrey, "Information and Knowledge Segregation and the Impact on Product Development Projects," February 2001, Prof. John Williams (Chair), MIT.
3. Sousa, Ines, "Learning Surrogate Model for Life-Cycle Cost Analysis of Integrated Product Designs," May 2002, Prof. Dave Marks (Chair), MIT.
4. Viteri, Victor, "Learning Assessment for Structural Engineering Abstract Concepts," May 2003, Prof. Jerome Connor (Chair), MIT.
5. Song, Kyuman, "3-Dimensional User-Centered Visual Representation of Project Scheduling System in Building Construction," May 2004, Prof. Spiro Pollalis (Chair), Harvard Graduate School of Design, Harvard University.
6. Hyari, Khalied, "Multi-Objective Optimization of Nighttime Construction Lighting," May 2004, Prof. Khaled El-Rayes (Chair), UIUC.
7. Burge, Janet, "Design Rationale for Software Development and Evolution," May 2005, Prof. David Brown (Chair), WPI.
8. Lin, Ken-Yu, "Integrated Mechanisms for Information Mining in Large Construction Databases," May 2005, Prof. Lucio Soibelman (Chair), UIUC.
9. Brilakis, Ioannis, "Integrated Graphical Information Mining of Large Construction Photographic Datasets," May 2005, Prof. Lucio Soibelman (Chair), UIUC.
10. Kandil, Amr, "Multi-Objective Optimization of Resource Scheduling using Genetic Algorithms," May 2005, Prof. Khaled El-Rayes (Chair), UIUC.
11. Manik, Anshu, "Effect of Different Contracting Methods in the Delivery of Large Transportation Infrastructure," May 2006, Prof. William Buttlar (Chair), UIUC.
12. Khalafallah, Ahmed, "Multi-Objective Optimization of Construction Safety Plans," May 2006, Prof. Khaled El-Rayes (Chair), UIUC.
13. Omar, Hesham, "A Knowledge-Enabled System For Coordinating The Design Of Co-Located Urban Infrastructure", May 2008, Prof. El-Diraby (Chair), University of Toronto.
14. Odeh, Ibrahim, "Multi-Objective Optimization of Construction Safety Plans," May 2009, Prof. Khaled El-Rayes (Chair), UIUC.

15. El-Anwar, Omar, "Multi-Objective Optimization of Temporary Housing," May 2009, Prof. Khaled El-Rayes (Chair), UIUC.
16. Leite, Fernanda, "Framework for Supporting the Decision-Making Process of First Responders in Building Emergencies," August 2009, Prof. Burcu Akinci (Chair), Carnegie Mellon University.
17. Di Marco, Melissa K., "The Roles and Impacts of Boundary Spanners and Boundary Objects in Global Project Network," March 2011, Prof. John Taylor (Chair), Columbia University.
18. Chen, Jiayu, "Simulating Network Structure, Layering Multi-layer Network Systems and Developing Network Block Configuration Models to Understand and Improve Energy Conservation in Residential Buildings," May 2012, Prof. John Taylor (Chair), Columbia University.

5. Editorships of Journals or Other Learned Publications

<u>Journal</u>	<u>Beginning</u>	<u>Ending</u>
Editorial Board Member, <u>Revista Ingeniería de Construcción</u> ,	September 1996	Present
Editorial Board Member, <u>IEEE Computer Society "Internet Computing" Magazine</u> , Editorial Board Member, <u>International</u>	September 1996	September 1998
<u>Journal of Computer-Integrated Design and Construction</u> ,	June 1997	December 2005
Editorial Board Member, <u>ASCE Journal of Computing in Civil Engineering</u>	October 1997	October 1998
Associate Editor, <u>ASCE Journal of Computing in Civil Engineering</u>	October 1998	September 2006
Specialty Editor, <u>ASCE Journal of Construction Engineering and Management</u>	July 2003	July 2012
Editorial Advisory Board Member, <u>Journal of Information Technology in Construction</u>	September 2005	November 2009
Specialty Editor, <u>ASCE Journal of Computing in Civil Engineering</u>	September 2007	present
Editorial Board Member, <u>Journal of Construction Engineering and Management</u>	September 2010	September 2014
Editorial Board Member, <u>International Journal of Architecture, Engineering and Construction</u>	September 2014	present
Editorial Board Member, Chinese Academy of Engineering <u>Frontiers of Engineering Management</u>	December 2017	present

6. Post-doctoral Associates and Visiting Scientists

Sergio Ochoa, July 2003 - June 2004, Chile, Universidad de Chile
Sungju Ahn, October 2007 - October 2008, Korea, Seoul National University
Zeeshan Aziz, October 2007 - January 2010, UK, Loughborough University
Zainab Raiz, September 2014 – August 2015, Pakistan, National University of Sciences and Technology
Xiaoling Song, September 2016 – August 2017, China, Nanjing University of Science and Technology

7. Other Scholarly Activities

<u>Activity</u>	<u>Beginning</u>	<u>Ending</u>
Planning Committee Member, Ford Foundation Fellows Conference	June 1994	October 1994
Scientific Committee Member, Int. Conf. on Information Technology in Civil and Structural Engineering Design	March 1995	August 1996
Scientific Committee Member, WET ICE '95, the Fifth Workshop on Enabling Technologies: Infrastructure for Collaborative Enterprises	November 1995	August 1996
Program Chair, IEEE WET-ICE: Infrastructure for Collaborative Enterprises	July 1996	June 1997
Planning Committee Member, Ford Foundation Fellows Conference	June 1994	October 1994
Reviewer, ASME Journal of Mechanical Design	November 1994	November 1995
Reviewer, Microcomputer in Civil Engineering Scientific Committee Member, International	January 1995	September 1997
Conference on Information Technology in Civil and Structural Engineering Design	March 1995	August 1996
Participant, NSF Strategic Planning Workshop for Design Engineering	May 1995	May 1995
Reviewer, Kansas Defense 2000 DEPSCoR	July 1995	September 1995
Reviewer, CERA Special Issue on Multi-Agent Systems in Concurrent Engineering	July 1995	September 1995
Best Paper Award Reviewer, ASCE Journal of Computing in Civil Engineering Paper	November 1995	December 1995
Scientific Committee Member, WET ICE '95, the Fifth Workshop on Enabling Technologies: Infrastructure for Collaborative Enterprises	November 1995	August 1996

Reviewer, International Conference on Information Technology in Civil and Structural Engineering Design	January 1996	May 1999
Reviewer, Communications of the ACM	January 1996	May 1999
Program Chair, IEEE WET-ICE: Infrastructure for Collaborative Enterprises	July 1996	June 1997
Scientific Committee Member, Conference on Concurrent Engineering in Construction '97	July 1996	July 1997
Co-Chair, American General Contractor Association/Boston Society of Architects (AGC/BSA) Information Technology Task Force Sub-Committee on IT Implementation	September 1996	May 1997
Reviewer, Journal of Advances in Engineering Software	January 1997	May 2000
Advisory Board Member, Artificial Intelligence in Design 1998	January 1997	June 1998
Reviewer, Conference on Concurrent Engineering in Construction '97	January 1997	July 1997
Reviewer, ASCE Journal of Computing in Civil Engineering	January 1997	Present
Participant, NSF Strategic Planning Workshop for Information Technology and Organizations Program	April 1997	April 1997
Planning Committee Member, ASCE Fifth Congress on Computing in Civil Engineering	June 1997	October 1998
Reviewer, NSF Information Technology and Organizations Program	June 1997	May 1999
Reviewer, AI for Engineering Design Analysis and Manufacturing	July 1997	December 2000
Participant, NSF Civil & Mechanical Systems Workshop	September 1997	September 1997
Panel Review Member, NSF Integrative Graduate Education and Research Training in the Experimental Software Systems Program	October 1997	October 1997
Scientific Committee Member, Conference on Concurrent Engineering in Construction '99	October 1997	August 1999

Panel Review Member, NSF CMS Program	July 1998	July 1998
Co-Technical Chair, ASCE/ICCCBE 2000	October 1998	August 2000
Panel Review Member, NSF Minority Institution Instrumentation Grant	April 1999	April 1999
Reviewer, AI in Design 2000	May 1999	September 1999
Reviewer, ASCE/ICCCBE Conference	June 1999	November 1999
Reviewer, AI in Engineering Journal	June 1999	May 2000
Reviewer, Computer-Aided Civil and Infrastructure Engineering	June 1999	December 2000
Reviewer, International Journal of Computer- Integrated Design and Construction	September 1999	December 2010
Participant, NSF-CMS Workshop for Engineering Educators	October 1999	October 1999
Panel Review Member, NSF CAREER on Education Practice Grant	November 1999	November 1999
Panel Review Member, NSF Minority Institution Instrumentation Grant	April 2000	April 2000
Delegation Member, NSF-Argentina and Chile Collaborative Research on Computer Science and Computer Engineering	May 2000	May 2000
Reviewer, NSF Information and Data Management Program	June 2000	June 2000
Planning Committee Member, Ford Foundation Fellows Conference	October 2000	October 2000
Grant Reviewer, UT Sydney	November 2000	November 2000
Member of a Committee to Review and Provide Recommendations for the Improvement of NSF Programs	May 2001	May 2001
Panel Review Member, NSF NEES Program	June 2002	June 2002
Panel Review Member, NSF CMS Program	May 2003	May 2003
Delegation Member, NSF-World Bank- United Nations Workshop on IT and Sustainability, Bangalore, India	January 2004	January 2004

Panel Review Member, NSF Minority Institution Instrumentation Grant	March 2004	March 2004
Workshop Chair, Proposal Preparation Workshop for NSF's Division of Civil & Mechanical Systems Infrastructure & Information Systems Program	April 2005	April 2005
Conference Chair, ASCE 2005 International Conference on Computing in Civil Engineering	July 2005	July 2005
Organizing Committee Member Chair, ASCE 2007 Construction Research Congress	May 2007	May 2007
Workshop Chair, Proposal Preparation Workshop for NSF's Division of Civil & Mechanical Systems & Information Systems Program	May 2007	May 2007
Technical Committee Chair, Construction Research Congress 2009	April 2009	April 2009
Technical Committee Chair, ASCE International Workshop on Computing in Civil Engineering	April 2009	April 2009
Chair, NSF Workshop Construction in the XXI Century	June 2009	June 2009
ASCE International Workshop on Computing in Civil Engineering 2013	June 2012	June 2013
ASCE International Conference in Sustainable Infrastructure 2017	October 2017	October 2017

Multiple committees at the level of New York City government including costal resiliency, housing restoration, universal pre-kindergarten, homelessness, emergency contracts, sustainability, among others.

Reviewer for several journals and conferences including: ASCE Journal of Computing in Civil Engineering, ASCE Journal of Construction Engineering and Management, ASME Journal of Mechanical Design, Microcomputer in Civil Engineering, Artificial Intelligence for Engineering Design, Analysis and Manufacturing, AI in Engineering Journal CERA Special Issue on Multi-Agent Systems in Concurrent Engineering, Communications of the ACM, Computer -Aided Civil and Infrastructure Engineering Journal of Computer-Aided Civil and Infrastructure Engineering, Journal of Advances in Engineering Software, International Journal of Computer-Integrated Design and Construction, International Research Journal of Automation in Construction, International Conference on Information Technology in Civil and Structural Engineering Design, Conference on Concurrent Engineering in Construction, ASCE/ICCCBE Computing Conference, AI in Design.

C. Service

1. Professional Society

Organization

Sigma Xi
New York Academy of Sciences
American Society of
Civil Engineering (ASCE)

Society for Advancement of Chicanos
and Native American in Sciences
(SACNAS)

Society for Professional Hispanic
Engineers (SHPE)

IEEE Computer Society Editorial Board Member

Association for Computing Machinery (ACM)
American Society of Engineering Education (ASEE)
Dominican Board of Engineers and Architects (CODIA)
George E. Brown Network for Earthquake Engineering
Simulation (NEES)

American Society of Civil Engineers
Industry Leaders Council

Offices Held

Associate Editor,
Journal of Computing in Civil
Engineering 1998-2006
Specialty Editor,
Journal of Construction and Engineering
Management 2003-Present
Specialty Editor,
Journal of Computing in Civil
Engineering 2007- Present

IEEE Computer
Society "Internet Computing" Magazine 1996-1998

October 2004-June 2009

October 2014-present

2. University

Activity

Member -- Minority Recruitment (Inst.)
Evaluator -- MITES Program (Inst.)
Strategic Planning Committee (Dept.)
Freshman Advisor (Inst.)
CEE Computer Committee (Dept.)
SDM (Inst.)
Co-Director IESL (Lab.)
CEE Computer Committee (Co-Chair) (D)
Curriculum Development (Dept.)
CEE Textbook Development Committee (D)
CEE Graduate Education Committee (D)
ESG PhD Admission Committee (Chair) (D)
ESG PhD Qualifier Exam Administrator (D)

Beginning

September 1991
March 1993
September 1993
September 1995
September 1996
September 1996
September 1996
September 1997
September 1997
June 1999
September 2000
September 2000
September 2000

Ending

May 1995
April 1993
May 1994
May 1997
May 1997
May 2000
July 2003
July 2003
December 1999
July 2003
July 2003
July 2003
July 2003

CEE Textbook Series Editorial Board (Dept.)	April 2001	June 2003
UROP Coordinator (Dept.)	January 2002	June 2003
CEE Advisory Committee (Dept.)	March 2004	August 2005
CEE Department Head Search (College)	August 2004	January 2005
CEE Administrative Committee (Dept.)	January 2004	August 2004
CM Faculty Search (Dept.)	January 2005	August 2006
Working Group on Inclusion and Diversity Topic in the University 101 Curriculum	May 2006	January 2007
Provost Academic Advising Committee	September 2006	December 2006
Graduate College EOP Review Committee	September 2006	May 2007
Graduate College Fellowship Board	September 2006	May 2007
Budget Model Working Group ICR Sub-Committee	September 2006	May 2007
Provost Enrollment Management Committee	September 2006	May 2007
Provost Office Staff - Dean of College of Law Search	August 2007	May 2008
Illinois Undergraduate Experience Committee	August 2007	May 2008
Summer Program Working Group	October 2007	May 2008
Technical System Program in ILIR	May 2006	July 2009
CEE P&T Committee (Dept.)	August 2006	July 2009
Co-Chair - Chancellor's Diversity Initiatives Committee	August 2006	July 2009
Provost P&T Reform Committee	September 2006	July 2009
University Lead - Interdisciplinary Consortium	July 2007	July 2009
Transfer Initiative Working Group	August 2007	July 2009
Interdisciplinary UG Degrees Working Group	August 2007	July 2009
Accreditation Self-Study Report: Transformative Learning Environment Committee	October 2007	July 2009
General University Policy Committee	October 2007	July 2009
Co-Chair- Faculty ePortfolio/P&T ePortal	October 2007	July 2009
Co-Chair – Institutional Entrepreneurship @ Illinois	October 2007	July 2009
Illinois-Lumina Foundation Transfer Initiative	October 2008	July 2009
Columbia University Council of Deans	July 2009	July 2012
Columbia University Housing Priority Committee	July 2009	July 2012
Columbia University North West Corner Executive Committee	July 2009	July 2012
Dean's Executive Committee	July 2009	July 2012
Dean's Faculty Advisory Committee	July 2009	July 2012
Dean's Academic Advisory Committee	July 2009	July 2012
NSF IGERT Committee	July 2009	July 2012
Capital BISS	July 2009	July 2012

4. Industry

Chiang Chen Industrial Charity Foundation	September 2010	Present
NYBC Innovation Taskforce (Member)	April 2014	December 2015
Center for Active Design (Board of Director Member)	April 2014	Present
ACE Mentorship Program (Board Member)	April 2014	Present
NYBC Council on Innovation (Co-Chair)	March 2016	Present
CIOB New York Group (Executive Board Member)	April 2016	Present

5. **External**

<u>Activity</u>	<u>Beginning</u>	<u>Ending</u>
Panel Member, “Minority and Women Perspective,” NAS/NAE/IOM Committee on Science, Engineering, and Public Policy (COSEPUP) “Reshaping the Graduate Education of Scientists and Engineers” 1995 Study	June 1994	June 1994
Delegation Member, NSF-Argentina and Chile Collaborative Research on Computer Science and Computer Engineering	May 2000	May 2000
Member of a the Committee of Visitors for NSF CISE Directorate/IEA Division	May 2001	May 2001
Delegation Member, NSF-World Bank-United Nations Workshop on IT and Sustainability, Bangalore, India	January 2004	January 2004
Panel Member, “Perspectives from Leading Interdisciplinary Researchers” National Academies Convocation on Facilitating Interdisciplinary Research Washington DC.	January 2004	January 2004
Chair of the Committee of Visitors for NSF CISE Directorate/CNS Division	March 2006	March 2006
Member, National Academies Committee on Advancing the Productivity and Competitiveness of the U.S. Construction Industry	August 2008	December 2008
US-European Summit on Science, Technology, and Sustainable Economic Growth	September 2010	September 2010
Reviewer for several funding agencies including: NSF Information Technology and Organizations Program, NSF Information and Data Management Program, NSF Civil & Mechanical Systems Program, NSF National Earthquake Engineering Simulation (NEES) Program, NSF Educational Practice Program, Kansas Defense 2000 <i>DEPSCoR</i> , Stanford University, UT Sydney, Australia, CONICYT, National Fund for Science and Technology (FONDECYT), Chile.		
Participant on several initiatives for NSF and for minority recruitment for science and engineering including: NSF Strategic Planning Workshop for Design Engineering, NSF Strategic Planning Workshop for Information Technology and Organizations Program, NSF Civil & Mechanical Systems Workshop for Minority and Women Retention in Engineering, NSF-CMS Workshop For Engineering Educators, ASEE Workshop on the Retention of Women and Minority in Engineering.		

4. Other Outside Service

Improvement Activities (*List any specific programs in which you have participated to improve teaching*)

- How To Speak: A Workshop with Prof. Patrick Winston, January 1999, MIT.
- Annual UIUC Faculty Retreat on Active Learning, February 2006, UIUC.
- International Studies Program Workshop, 2006, UIUC.
- CIC Senior Leadership Seminar Series, 2006-2007, Purdue, Ohio State, Madison-Wisconsin
- A Leaders Guide to Managing at the University of Illinois, 2007 – 2008, UIUC.
- Harvard Institute for Higher Education: Institute for Management and Leadership in Education, June 24-26, 2009, Harvard University.
- American Council on Education: ACE Fellows Program (class of Fellows 2009-2010 but differed due to being selected as Dean of The Fu Foundation School of Engineering and Applied Science, Columbia University).