

**Dr. MOUSUMI ROY, PE**  
**Assistant Professor-in-Residence**  
**Management and Engineering for Manufacturing (MEM) Program**  
**Department of Civil and Environmental Engineering**  
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**EDUCATION:**

Doctorate in Civil Engineering and Engineering Mechanics, 1993, *Columbia University, NY, NY*  
ME in Structural Engineering, 1989, *The Cooper Union, NY, NY*  
Bachelor of Civil Engineering, 1984, *Jadavpur University, Calcutta, India*

**ACADEMIC EXPERIENCE:**

|                     |  |
|---------------------|--|
| Fall 2015 – current | Assistant Professor-in-Residence, <i>University of Connecticut, Storrs, CT</i><br>Joint appointment in Management and Engineering for Manufacturing Program and Civil and Environmental Engineering Department |
| Spring 2015         | Instructor, <i>Wilkes University, Wilkes-Barre, PA</i> , Department of Mechanical Engineering  |
| 2006 - 2010         | Instructor, <i>Penn State University, Scranton-Worthington, PA</i> , Mathematics Dept.   |
| Fall 2008           | Lecturer, <i>Prudential Investment, Moosic, PA</i>   |
| 2004 - 2005         | Lecturer, <i>Johns Hopkins University, MD</i> , Department of Civil Engineering  |

**INDUSTRY EMPLOYMENT:**

|             |   |
|-------------|---|
| 2001 - 2006 | Structural Engineer at <i>Whitney, Bailey, Cox, Magnani in Baltimore, MD</i>                    |
| 1996 - 2001 | Structural Engineer at <i>Weidlinger Associates in Cambridge, MA</i>                            |
| 1993 - 1996 | Structural Engineer at <i>Bettigole Andrews &amp; Clark, Inc. in Hackensack, NJ, and NY, NY</i> |
| 1984 - 1988 | Structural Engineer at <i>Consulting Engineering Services, India</i>                            |

**Responsibilities included:**

- Analysis, design and construction supervision of high-rise office and residential buildings, parking garages, and other types of structures.
- Inspection and preparation of reports including repair details for trusses in *Manhattan Bridge* and other bridges in New York and New Jersey.
- Analysis, designs, and construction supervision of approach highway at Terminal 5 of *Logan International Airport, MA*.
- Business proposal preparation for different construction projects and feasibility study of alternative proposals based on their financial and other merits.
- Project management by preparing construction schedules and attending meetings with design team, construction supervisors, and other related personnel.

## **COURSES TAUGHT:**

|   |  |
|---|--|
| Applied Mechanics   | Probability and Statistics for Civil and Environmental Engr. |
| Manufacturing Automation  | Introduction to Manufacturing Systems (Lecture and Lab)      |
| Concrete Structures   | Integrated Product Development                               |
| Orientation to Engineering  | Quantitative Analysis for Business Managers                  |
| Differential and Integral Calculus  | Statistical Analysis   |
| Senior Design for MEM Program (Instructor for 6 teams in 2018-2019, and 9 teams in 2017-2018) |  |

## **JOURNAL PUBLICATIONS:**

1. M. Roy & A. Roy, "Nexus of Internet of Things (IoT) and Big Data: Roadmap for Smart Management Systems (SMgS)," *IEEE Engineering Management Review*, vol. 47(2), pp. 53-65, 2019.
2. M. Roy, "Asia's Role in the Four Industrial Revolutions," *Education About Asia*, vol. 23, pp. 51-56, Association for Asian Studies. 2018.
3. A. Roy, P. Paul, M. Roy, and K. Mukhopadhyay, "Mapping Confucian Values in the Context of Ethical Dimensions: Implications for Contemporary Business Practices," *Business and Professional Ethics Journal*, vol 37(2) , pp. 181-212, 2018.
4. A. Roy and M. Roy, "Antecedents and Consequences of Impending Population Implosion in the Developed World: Implications for Business Systems," *International Journal of Sustainable Society*, vol. 7(2), pp. 151-172, 2015.
5. A. Roy and M. Roy, "Managing and Leveraging Poverty : Implications for Teaching International Business," *Journal of Teaching in International Business*, vol. 21, pp. 4-26, 2010.
6. A Roy and M. Roy, "Reengineering an Urban Slum: A Case Study of Dharavi, India", *International Journal of Sustainable Society*, vol. 2(4), pp. 420- 437, 2010.
7. M. Roy, "Theoretical and Experimental Study of Buckling of Built-up Column," *ASCE Journal of Engineering Mechanics*, 1995, vol. 121(10), pp.1200-1208,1995.
8. M. Roy, "Buckling Loads for Built up Columns with Stay Plates," *ASCE Journal of Engineering Mechanics*, 1995, vol. 121(11), pp.1200-1208 1995

## **BOOK CHAPTERS:**

1. M. Roy, "Burr Truss Bridge" in *Technical Innovation in American History: An encyclopedia of Science and Technology*, R. Welch and P. A. Lamphier, Eds. ABC-CLIO, 2019, vol.1, pp. 91-92.
2. M. Roy, "Internal Combustion Engine" in *Technical Innovation in American History: An encyclopedia of Science and Technology*, R. Welch and P. A. Lamphier, Eds. ABC-CLIO, 2019, vol.1, pp. 119-121.
3. M. Roy, "Suspension Bridge" in *Technical Innovation in American History: An encyclopedia of Science and Technology*, R. Welch and P. A. Lamphier, Eds. ABC-CLIO, 2019, vol.1, pp. 155-157.

4. M. Roy, "Wind Energy," in *Technical Innovation in American History: An encyclopedia of Science and Technology*, R. Welch and P. A. Lamphier, Eds. ABC-CLIO, 2019, vol. 3, pp. 242-244.
5. M. Roy, "Population Growth," in *The SAGE Encyclopedia of Business Ethics and Society*, R. W. Kolb, Ed. Sage, 2018, pp. 2681-2685.
6. M. Roy, "Technology Assessment," in *The SAGE Encyclopedia of Business Ethics and Society*, R. W. Kolb, Ed. Sage, 2018, pp. 3371-3372.
7. M. Roy, "Workplace Safety," in *The SAGE Encyclopedia of Business Ethics and Society*, R. W. Kolb, Ed. Sage, 2018, pp. 3687-3688.
8. M. Roy, "Diversity in the Workplace," in *The SAGE Encyclopedia of Business Ethics and Society*, R. W. Kolb, Ed. Sage, 2018, pp. 941-945.
9. M. Roy, "Lean Manufacturing: Principles, Tools and Practices," in *Handbook of Research on Applied Optimization Methodologies in Manufacturing Systems*, B. Christiansen, Ed. Hersey, PA: IGI Global, 2018, pp. 334-352.
10. M. Roy and A. Roy "Identity, Marketing," in *The SAGE Encyclopedia of Economics and Society*, F. F. Wherry and J. B. Schor, Eds. Sage, 2015, pp. 901-904.
11. M. Roy and A. Roy, "Quality of Life," in *The SAGE Encyclopedia of Economics and Society*, F. F. Wherry and J. B. Schor, Eds. Sage, 2015, pp. 1363-1367.
12. M. Roy, "Clean Air Act" in *Encyclopedia of Consumption and Waste: The Social Science of Garbage*, C. A. Zimring and W. L. Rathje, Eds., SAGE, 2012, pp. 123- 125.
13. M. Roy, "Rittenhouse Mill" in *Encyclopedia of Consumption and Waste: The Social Science of Garbage*, C. A. Zimring and W. L. Rathje, Eds., SAGE, 2012, pp. 760-762.
14. M. Roy and J. Coleman, "Environmental Indicators," in *Green Business: An A-to-Z Guide*, P. Robbins and N. Cohen, Eds. SAGE, 2011.

#### **TEST BANKS:**

1. Roy, M. (2016). Prepared the Test Bank for the text book "*Product Design and Development*, 6<sup>th</sup> edition" by Karl T. Ulrich and Steven D. Eppinger, McGraw-Hill, Irwin.

#### **BOOK REVIEW:**

1. Reviewed journal article "Data market strategy" for the *California Management Review* in 2018-2019

#### **CONFERENCE PROCEEDINGS:**

1. "The Role of Internet of Things (IoT) and Big Data as a Roadmap for a Smart Management System: Case Studies Across Industries", *Proceedings of the ASEE Annual Conference and Exposition*, Utah, June 2018.

2. "Redeveloping an Urban Slum: A Case Study and Macro-marketing Implications", *Proceedings of the Macro-marketing Society*, Clemson, SC, June 2008 [with A.Roy].
3. "Alleviating Poverty: Implications for Business Education," *Proceedings of the 2007 Global Conference on Business and Finance*, San Jose, Costa Rica, May 2007 [with A.Roy].

#### **CONFERENCES/SEMINARS/ WORKSHOPS:**

- Attended *Eastec Conference and Exhibition* in Spring 2019, Springfield, MA
- Attended *North American Bitcoin and Blockchain Conference and Exhibition* in Spring 2019, Miami, FL
- Attended Teaching workshop *Theater Delta* in Spring 2019.
- Attended *7th Annual Women in Manufacturing SUMMIT* in Fall 2017, Hartford, CT.
- Attended *Faculty Teaching Workshop* on Helping STEM students to develop high level skills in Fall 2017, Storrs, CT.
- Attended *Inside 3D Printing Conference and Expo* in Spring, 2017, New York, NY.
- Attended *President's series on Teaching Excellence* by Dr. Mitch Green in Spring 2017, Storrs, CT.
- Attended *Manufacturing conference Mfg4* in Spring, 2016, Hartford, CT.
- Attended *Entrepreneurship in Africa* Conference at Syracuse University, April 2010 Syracuse, NY.
- Attended *Workshop, Political and Social Networks Conference and Workshop* at Harvard Kennedy School of Government in June 2009, Cambridge, MA.

#### **SERVICE:**

##### **Professional Service:**

- Served as a review panelist for the NSF Graduate Research Fellowship Program in Civil (2017-2018), Mechanical and Operation Research (2018-2019)
- Served as one of the Judges for 3D printing competition for *Access Independence* in Fall 2017

##### **University Service:**

###### **2018-2019:**

- Attended Commencement Ceremony for Undergraduate students
- Organized and Attended the *Demo Day* Event in Spring
- Volunteered to School of Engineering Open House in Spring
- Volunteered to the *Invention Convention* event in Spring
- Attended Engineering House Learning Community Annual Dean's Dinner in Spring
- Attended MEM Annual Banquet in Spring
- Attended *WIMSE* meetings

###### **2017-2018:**

- Served as a Marshall at the Commencement Ceremony for Undergraduate students
- Volunteered to the School of Engineering Open House
- Attended the *Demo Day* Event in Spring

- Accompanied students to the *ACM Workforce* Fair in Spring
- Attended MEM Annual Banquets
- Attended UConn NSBE Chapter Reception Celebrating the 50th Anniversary of the *African American Cultural Center* in Spring
- Accompanies students to *MasterCam* and *Dymotek* in Fall for the *Manufacturing Day Event*
- Attended *WIMSE* meetings

#### **2016-2017:**

- Attended Commencement Ceremony for Undergraduate students
- Attended the *Demo Day* Event in Spring
- Volunteered to School of Engineering Open House
- Attended MEM Annual Banquets
- Accompanies students to *Jacobs Vehicles Systems* in Fall 2016 for the *Manufacturing Day Event*
- Volunteered to the *Invention Convention* in Spring
- Invited guest lecturers Ms. Linda T. Tomasi, Chief Operations Officer from *RSL Fibers Systems, LLC* in Fall and Mr. John Marcelli, Regional Account Manager from *Stratasys Direct Manufacturing* in Spring
- Attended weekly seminars
- Attended *WIMSE* meetings

#### **2015-2016:**

- Attended Commencement Ceremony for Undergraduate
- Volunteered to School of Engineering Open Houses
- Attended the *Demo Day* Event in Spring
- Attended MEM Annual Banquet
- Attended *WIMSE* meetings

#### **HONORS:**

- Awarded *UNH-Integrated E-Learning Modules Mini-Grant*, University of New Haven (KEEN & Connecticut Innovations), University, Spring 2018.
- Guided two teams to win first & third prizes in 2018-2019, and three teams to win first, second, and third prizes in 2017-2018 for senior design.
- Received letter of recognition for Excellence in Teaching from office of the Provost at University of Connecticut in 2016.
- Runner up for “Modernizing Dharavi: If you build, will they come?” with A. Roy in *Oikos Case Writing Competition* in Corporate Sustainability Track in 2013.

#### **SOFTWARE SKILLS:**

Engineering and Business software such as *Solid Works*, *STAAD*, *RAMSTEEL*, *AUTOCAD*, *R*, *UCINET*, *SPSS*, *AMOS*

**ONLINE COURSES TAKEN (2011-2017):**

|                           |  |
|---------------------------|--|
| Deterioration of Concrete | Homebuilders Guide to Earthquake Resistant Design                  |
| Fundamental of Metals     | Pavement Design for Roads, Streets, Walks, and Open Storage Area   |
| Networked Life            | Statistics: Making Sense of Data      Social and Economic Networks |

**PROFESSIONAL MEMBERSHIP:**

|  |   |
|--|---|
| PE in Civil Engineering                      | ASEE (Association of Engineering Education) |
| ASEM (Association of Engineering Management) | SME (Society of Manufacturing Engineers)    |

**CITIZENSHIP:** US Citizen**REFERENCES:** Available Upon Request