

Rajan Batta: Basic Information

SUNY Distinguished Professor, Department of Industrial and Systems Engineering (410 Bell Hall)
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Professional Interests

Creation of novel and innovative solution methods using Industrial and Systems Engineering principles to study logistical problems of significant societal and business impact.

Education

Doctor of Philosophy in Operations Research (1984)
Department of Electrical Engineering and Computer Science
Massachusetts Institute of Technology, Cambridge, Massachusetts

Bachelor of Technology in Mechanical Engineering (1980)
Department of Mechanical Engineering
Indian Institute of Technology, New Delhi, India

Academic Experience

Department of Industrial and Systems Engineering
SUNY Distinguished Professor: 2013-
Professor: 1994-2013
Associate Professor: 1990-1994
Assistant Professor: 1984-90
Director of Graduate Studies: 2003-2005
Chair: 1994-2003
Interim Chair: 1992-1994

School of Engineering and Applied Sciences
Associate Dean for Faculty Affairs: 2014 to present
Associate Dean for Research and Graduate Education: 2013-2014
Acting/Interim Dean: April 2011-December 2012
Associate Dean for Graduate Education: 2006-2011

Research Awards

1. Award for Technical Innovation in Industrial Engineering, Institute of Industrial and Systems Engineers, 2016

As stated on the IISE website, this award honors a single innovative technical contribution to the industrial engineering profession that may be recognized in any of several forms, including theory, design, application, implementation and leadership, to name a few.

2. Best paper award for the journal *IIE Transactions: Design and Manufacturing*, 2013, for the paper: M. Zhang, R. Batta and R. Nagi, "Designing Manufacturing Facility Layouts to Mitigate Congestion," Vol. 45, No. 4, (2011), pp. 132-145.

Each year the journal editor selects the best paper published in *IIE Transactions: Design and Manufacturing*.

3. AIIMS-MOPTA Optimization Modeling Competition Winner, Lehigh University, 2012.

The yearly AIMMS/MOPTA Optimization Modeling Competition attracts entries from around the world. The challenge problem for 2012 related to scheduling smart grids. Gina Galindo, Ruben Yie (both doctoral students) and Rajan Batta (faculty) were the winners.

4. Dr. David F. Baker Distinguished Research Award, Institute of Industrial Engineers, 2008

As stated on the IIE website, this award recognizes outstanding research in the profession. This award is for a career of accomplishments that broadly benefited practitioners, organizations, or other researchers rather than for a single activity or application.

5. SUNY Research Foundation Award for Research and Scholarship, 2007

The Research and Scholarship Award is the highest honor the Research Foundation can bestow on SUNY faculty for their outstanding scholarly and research contributions.

6. Best paper award from the journal *Military Operations Research*, 2004, for the paper: S. Mishra, R. Batta and R. J. Szczerba, "A Rule-Based Approach for Aircraft Dispatching to Emerging Targets," *Military Operations Research*, 9,3, (2004), 17-30.

Each year the journal editor selects the best paper published in *Military Operations Research*.

7. Sustained Achievement Award, Exceptional Scholar Program, University at Buffalo, 2002

According to the UB website, the Exceptional Scholar Award for Sustained Achievement recognizes an unprecedented accomplishment in a senior scholar's career.

Teaching Awards

1. Albert G. Holzman Distinguished Educator Award, Institute of Industrial Engineers, 2015

As stated on the IIE website, this award is for significant contributions to the industrial engineering profession by an outstanding educator.

2. University at Buffalo Excellence in Graduate Student Mentoring Award, 2014-2015

As per the UB graduate school website, this award reward recognizes truly outstanding and sustained support and development of graduate students from course completion through research and subsequent career placement

3. SUNY Chancellor's Award for Excellence in Teaching, 2007

This is the highest teaching award available from the State University of New York system

Leadership Awards

1. Faculty in Leadership Fellow, Office of the Provost, University at Buffalo, 2005-06
2. Eminent Engineer Designation, Tau Beta Pi, The Engineering Honor Society, 2008
3. Fellow, Institute of Industrial Engineers, 2006

Student Awards

1. Merit Scholarships for all five years of study (1975-80) at the Indian Institute of Technology, Delhi, India
2. Junior and Senior Science Talent Awards, 1972 and 1974, Government of India

News Articles on Research

Airport Security Applications

My research on the impact of queue length on the integrity of an airport security system is discussed at the following website:

<http://www.msnbc.msn.com/id/21569234/>

Military Applications

"UB Software to Give U.S. Military a Clearer Picture of 'Theater of War'," [Read more.](#)

"Understanding Battlefield Realities: Software Allows the Military to Track and Predict Movements," [Industrial Engineering](#), March 2004.

"New Software Helps Lift 'Fog and War'," [Read more.](#)

Crime Modeling Applications

"Mathematical Model Joins War on Drugs," [OR/MS Today](#), October 1992, Vol. 19, No. 5.

"Industrial Engineers Develop Model for War on Drugs," [Industrial Engineering](#), September 1992, Vol. 24, No. 4.

"War on Drugs gets Help from Unlikely Source: Math Model Predicts Success," [Crime Control Digest](#), June 22, 1992, Vol. 26, No. 25.

"The Police Department in Buffalo gets Some Ideas About how to Make its Drug-Enforcement Efforts More Efficient," The Chronicle of Higher Education, July 8, 1992, Vol. 38, No. 44.

"Researchers Eye Formula for War on Drug Business," The Buffalo News, June 22, 1992.

"Fighting Drugs with Mathematics," UB Today, Fall 1992.

"Drug War: Researchers Say Common Manufacturing Strategy Could Help," Narcotics Control Digest, September 15, 1993, Vol. 23, No. 19.

Discussion on CBS Radio, Seattle, Washington. "Waging an Optimal War on Drugs," OR/MS Today, October 1993, Vol. 20, No. 5.

Journal Editorial Board Service

1. Departmental Editor, IIE Transactions (2001-present)
2. Editorial Advisory Board, Computers and Operations Research (1997-present)
3. Editorial Advisory Board, Journal of Enterprise Transformation (2010-present)
4. Editorial Advisory Board, Socio-Economic Planning Sciences (2010-present)

Professional Service

Service to Institute of Industrial Engineers (IIE)

Senior Vice-President for Publications, Board of Trustees (April 1, 2008 to March 31, 2011): Task was to manage the publications delivered by IIE. This included strategic planning of publication stream to match the objectives of IIE and participation in other board activities and functions. Helped IIE launch three brand new journals: IIE Transactions on Healthcare Systems Engineering; IIE Transactions on Occupational Ergonomics and Human Factors; Journal of Enterprise Transformation.

Chair for IERC for 2006 conference: Tasks included creation of conference committee, solicitation of a plenary speaker (a first for IERC), solicitation of tutorials, working with committee members to organize invited sessions, coordination with the Solutions conference for overlap day activities, selection of contributed talks among those submitted, assistance in publicity about the conference, reporting to CIEADH regarding conference status, and coordination of review process and creation of the conference proceedings.

Departmental Editor for IIE Transactions (Scheduling & Logistics): Handle about 6 papers a year for the journal. Handling a paper involves assignment of an appropriate Associate Editor and subsequent coordination of the refereeing process. On completion of the refereeing process and receipt of the AEs recommendation a decision is made on how to proceed (accept, revise, reject).

ABET Evaluator: Have served as an evaluator on five occasions and have received evaluator training on two separate occasions. Tasks included review of the self-study documents, a visit onsite for 3 days, coordination with other team members on school-wide issues, and submission of an evaluation to the team chair.

Service to Institute for Operations Research and the Management Sciences (INFORMS)

Served as President for ACORD, Association of Operations Research Related Department Heads. In this role coordinated the meeting of department heads at the INFORMS conference and created action items relative to helping the society in student recruitment and membership growth in general.

Served as a Chair of the FORA committee. In this role helped create two special interest groups that have since become very active in the society. These are the Junior Faculty Interest Group that serves as a conduit to encourage junior faculty to join and subsequently succeed in the profession, and the Women Interest Group that serves as a similar role for women.

Service at University of Buffalo (SUNY)

Associate Dean for Faculty Affairs—July 2014 to present

Assist and serve as counsel to the dean in matters related to the faculty. These include faculty tenure and promotion cases, faculty recruitment, faculty awards, and junior faculty mentoring initiatives.

Acting/Interim Dean—April 2011 to December 2012

Development and Execution of Strategic Plans:

Worked with department chairs to help develop and craft a 3-year unit plan, aimed at a significant expansion of our school (35% growth anticipated in faculty and staff over the next 5 year period). This 3-year plan for the school is tied with 3 year plans developed by each of the departments, and is also linked with the metrics and plan set forth by the UB Provost Office and follows the guiding principles of NYSUNY2020.

Education and Outreach:

Worked with the College of Arts and Sciences towards a successful 3 E proposal, that led to an initiative to create a new graduate program (MS and PhD) in the area of Materials Science and Engineering. This initiative will hire six additional faculty members across the two schools and foster a new interdisciplinary graduate program in Materials Science and Engineering.

On the international front, the nominee successfully renewed our 5-year MOU for the Dual Degree Program with Istanbul Technical University in the area of Civil Engineering. The nominee visited several international universities in an attempt to foster collaborations.

Associate Dean for Graduate Studies—January 2006 through April 2011, and January 2013-June 2014(with Research responsibilities added)

Several new initiatives were established in this role. These included: (i) welcoming activities for graduate students to ensure a smooth transition to UB Engineering; (ii) three sets of surveys for graduate students to monitor student intent, progress and satisfaction level; (iii) a career fair specifically for graduate students; (iv) a student ambassador program for fielding questions from prospective students; (v) a poster competition; (vi) a workshop for students interested in being faculty members; and (vii) development of an electronic review system for graduate student applications.

Faculty in Leadership Fellow for the 2005-06 academic year

Work was with the Vice Provost for Faculty Affairs and focused on various activities in managing university faculty, including tenure and promotion, and mentoring. Helped create a new workshop for department chairs for issues related to managing their faculty effectively and in being effective leaders

Department Chair for Industrial Engineering for 11 years (2 years as interim)

During this period, the department transformed itself from being a major generator of UG degrees to being a major generator of MS, M Eng and PhD degrees. Research funding substantially increased during this period. A major success was mentoring junior faculty and creation of new leadership in the department.