

IEOR Update

These are exciting times for UC Berkeley's Department of Industrial Engineering and Operations Research. We are developing an advisory board, we are starting new programs, expanding into new areas, and seeing our established and recently developed programs flourish. This summer we hosted the 2009 Workshop on Mixed Integer Programming, and our energetic and talented students recently hosted the 30th Annual Western Regional IIE Conference. Finally, IEOR dominated the College's recent graduation ceremony.

Congratulations Graduates!

A number of outstanding students graduated this spring: 5 students received PhD's, 9 received their MS, 43 received their BS in IEOR, and 8 received their BA in ORMS. The speaker at graduation was an IEOR alumnus, Coleman Fung, and the student speaker was an IEOR student, Yue Tu, who gave a very entertaining account of Operations Research, Industrial Engineering, and Management Science. Many of our students, both graduating and continuing, received awards at our first annual reward reception. [Read more.](#)

Faculty Awards

Kudos for many members of our faculty! Christos Papadimitriou was recently elected to the National Academy of Sciences. At the 2008 INFORMS Conference, quite a few of our faculty were also honored: Max Shen received the 2008 Inaugural Chuck ReVelle Rising Star Award from the INFORMS Society on Logistics Analysis; Candace Yano was presented with the Award for the Advancement of Women in OR/MS, given by the Women in OR/MS Forum of INFORMS; Shmuel Oren and his coauthor won the Best Publication in Energy Award from the Energy, Natural Resources and the Environment Section of INFORMS. Also this past year, Laurent El Ghaoui and his coauthors won the 2008 SIAM Activity Group on Optimization (SIAG/OPT) Prize for the most outstanding optimization paper of 2008. Richard Karp received the Kyoto Prize in Advanced Technology from the Inamori Foundation in November 2008, as well as the Dickson Prize in Science from Carnegie Mellon University in March 2009. Lee Schruben was recognized for his dedication to teaching and advising with the 2007-08 Sarlo Distinguished Graduate Student Mentoring Award. Ikhlaq Sidhu received the 2009 IEOR Chair's Emerging Area Professor Award for playing a prominent role in developing a research and teaching presence in an area of emerging importance to the profession: Entrepreneurship and Innovation. Dorit Hochbaum was part of a team that received a \$7.1 million grant from NSF for Domestic Nuclear Security Technology. Some of our faculty were even recognized for work outside of their field: Kenneth Goldberg won the 2007 Isadora Duncan Award (Izzie) Award at the Bay Area Dance Awards and Voice of Dance for his work on SF Ballet's *Ballet Mori*. Professor Goldberg has also been named the craigslist Distinguished Chair in New Media.

Center for Entrepreneurship & Technology

IEOR is strengthening its ties with the Center for Entrepreneurship & Technology (CET). A CITRIS-affiliated academic center and industry partnership within UC Berkeley's College of Engineering, CET's mission is to equip engineers and scientists with the skills to lead, innovate, and commercialize technology in the global economy. The center teaches hundreds of students per year. CET also supports new ventures in the U.C. Berkeley Global Venture Lab, hosts the A. Richard Newton Distinguished Innovator Lecture Series and Global Technology Leaders conference supported by the Kauffman Foundation, and publishes Global Venture Lab Technical Briefs to accelerate the creation of new industries such as Electric Vehicles and Health 2.0. IEOR and CET are also becoming more closely linked to the Master of Technology (MOT) program.

New Bachelor's/Master's Program

The IEOR Department will soon implement a two-year pilot program for a five-year combined Bachelor's/Master's option for IEOR and ORMS undergraduates to broaden their educational experiences at Berkeley. It is designed to allow a small number of students with outstanding performance to obtain both degrees in five years. The IEOR Master's program typically takes three semesters to complete. The five-year Bachelor's/Master's program will allow well-prepared students to start taking graduate-level courses in their senior year. Admission to this program will be more selective than the standard admission to the MS program. The program will include a three-course concentration and an individual or small-group project.

New Financial Systems Programs

The department is also developing new programs in financial systems, both within the department and across several departments in the Colleges of Engineering and Letters and Science.

The ORMS Program

The Operations Research/Management Science program for Letters and Science majors, established in 2004, continues to be extremely popular. ORMS majors develop solid quantitative, model building, and problem solving skills through core courses in mathematics, statistics, and operations research, and learn how to apply these skills in solving problems in an area of their choice. Students choose one of four possible concentrations: Decision Making in Economic Systems, Decision Making in Industrial and Service Systems, Decision Making in Societal Systems, and Algorithmic Decision Making. Students may alternatively design their own concentrations according to their interests, with guidance from their faculty advisor. Such areas might include legal systems (for pre-law students for example), government/political systems, public health, and international economics.

The UC Berkeley Center for Biopharmaceutical Operations

Since its inception, the biopharmaceutical industry has had strong ties to UC Berkeley, but these ties have been primarily in the areas of research and development of new products. There has been relatively little research focusing on operations and supply chain management in the industry, although advances in these areas are critical for biopharmaceuticals to reach their potential of efficiently and cost-effectively helping millions of people. Several IEOR faculty members are addressing these issues by developing a collaborative center to bring together academic researchers and biopharmaceutical professionals to advance the state of the art in biopharmaceutical operations and supply chain management, with a focus on developing tools, techniques, and approaches leading to cost-effective, reliable biopharmaceutical production systems and supply chains. The center, called the UC Berkeley Center for Biopharmaceutical Operations (CBO), has several goals, including facilitating collaboration between academia and industry and across firms in industry, developing a research agenda to address critical issues facing the industry, conducting a biopharmaceutical operations benchmarking study, developing and providing courses as well as educational seminars for industry, and providing industry with world-class employees. CBO and its members have already completed several successful collaborative projects with major biopharmaceutical companies, and run several well-attended courses, seminars, and workshops to discuss these projects.

Workshop on Mixed Integer Programming

The IEOR department hosted the 2009 Workshop on Mixed Integer Programming (MIP 2009) in the second week of June. The international workshop was the latest of a series bringing together the integer programming research community in an annual meeting. MIP 2009 was a big success and attracted over 100 researchers from all around the world. The workshop was funded completely by corporate sponsors including IBM, Microsoft, ILOG, GAMS, Mosek, Gurobi, Lindo Systems. Professor Alper Atamturk was the host organizer of MIP 2009.

Western Regional IEE Conference

The UC Berkeley student chapter of the Institute of Industrial Engineers hosted the 30th Annual Western Regional IIE Conference, held April 3-5, 2009 on campus. Each year industrial engineering students, faculty and working professionals meet to take part in the social networking events, to compete in the technical paper competition, to attend a dedicated career fair, and to discuss academic and professional knowledge at this weekend event. The theme of the conference was "Entrepreneurship and Leadership in Industrial Engineering." The conference served as a forum for discussing entrepreneurship and innovation, promoting leadership and exploring new directions in the field of industrial engineering. The conference also provided opportunities for current and potential industrial engineering students to network with experienced professionals in positions of leadership.

UC Berkeley's IEOR department continues to play an important role in California's industrial development, by educating future leaders and providing critical research for such emerging industries as biotechnology.