

Industrial and Systems Engineering

P.C. Rossin College of Engineering and Applied Science

Chairs' Message

It has been quite a while since our last newsletter. This period was an exceptionally busy time for everyone at the Department of Industrial & Systems Engineering. Faculty, staff, adjuncts and teaching assistants have been working hard to ensure a seamless operation of the department and to provide the highest quality education and research experience to our students. It is my privilege as the new Chair of the ISE department to summarize the events and changes which have occurred in the past year, to acknowledge those who most contributed to the department, to mention who has left the Lehigh family, and to introduce our new faculty.

Let me start with the chair of the department. As you see from the outgoing chair's message on this page, the previous chair, Joe Hartman left Lehigh in the summer of 2007 to assume his new position as the Chair of the Department of Industrial and Systems Engineering at the University of Florida. The ISE community of Lehigh has fond memories of Joe's tenure and thanks him for his numerous contributions at Lehigh University. We wish him continued success in the new chapter of his professional life. Joe's departure left a hole at the leadership of the department which was filled by Greg Tonkay as Interim Chair.

Greg devoted his endless energy to the department at a critical time. Teaching resources were further stressed by Jeff Linderoth's move towards new challenges in his new job at the University of Wisconsin-Madison. An open search was started for a new department chair, with Bob Storer as the Search Committee Chair. To fill the gaps in the professorial rank, a search committee chaired by Mike Groover was formed to recruit a Visiting Assistant Professor that resulted in the appointments of Pietro Bellotti (previous appointment at Carnegie-Mellon University, Pittsburgh) and Imre Pólik (previous appointment at McMaster University, Hamilton, ON). You will see brief profiles of these colleagues inside this newsletter.

A major task of the Interim Chair was to lead the ISE Department through the ABET accredi-

tation process. Only those who have led departments through such accreditation exercises know the magnitude of this work.

Thanks to Greg, it is with great pride that we may announce that both the Industrial Engineering and the Information and Systems Engineering programs of the ISE department have gained ABET accreditation without any identified weaknesses. It is my duty and privilege to thank Greg, all faculty members, and the staff of the department for their endless efforts, and to thank all current and former students for their support and highly positive feedback. The joint effort has ensured the success of the accreditation exercise, a success that all the ISE community should be proud of. Thanks Greg - thank you all!

I am also pleased to report that the undergraduate and graduate enrollment of the ISE Department is healthy. A career in industrial and systems engineering is more and more attractive to students; our master programs offer challenges and valuable knowledge to those interested in applying a higher level of skills in industry and government jobs. Our Ph.D. students continue to profit from the research expertise and reputation of our faculty. You will read about further good news such as faculty honors, updates, awards, and other details throughout this newsletter.

In this new academic year, the department is facing new challenges and looking forward to capitalizing on new opportunities. Our excitement right now is with current building renovations such as the new entrance doors being installed in the lobby of Mohler Lab. We are also developing a plan for a new compu-



continued from page 1

tational lab that will be funded with a \$100,000 gift from an alumnus. This \$100,000 gift will enable us to establish a technology lab equipped with state of the art computers for students, projection screens for instructors, and the software to bring IE solutions to life. The lab will showcase optimization, computational and operations research tools and techniques, bringing these concepts to the fingertips of students and enabling the students to experience the power of those methodologies and software tools on-line.

Finally, a personal note. This is the fourth country and the fourth university I call home. I started my professional carrier at the Eötvös University, Budapest, Hungary, and then worked for a decade in The Netherlands at Delft University and Technology. Since 1999, I have had my appointment at McMaster University, Hamilton, Ontario as a professor, a Canada Research Chair in Optimization, and lately as the founding director of the McMaster School of Computational Engineering and Science. I moved to the Lehigh Valley with my wife Gabi, who is extremely busy these months to make our new house a home. We both are excited about the challenges and opportunities that the ISE Department, Lehigh University, and the new environment offer to us. Our son Viktor has stayed in Ottawa to continue his Ph.D. studies in Geology.

As a new chair, I am most pleased with the warm welcome at the ISE Department, at Lehigh University, and by everyone in the Lehigh Valley. I am eager to learn about Lehigh's traditions, values, and the great history of the ISE department. Long before coming here, I had already heard about the strong, highly supportive Lehigh alumni community. I have full confidence that, with your help and support, the Industrial and Systems Engineering Department is moving towards new heights.

Your support, your suggestions, or just simple observations are critical for making informed decisions. Thus, I would like to hear your opinions, ideas, suggestions, or anything else you may want to share with me. Call at 610-758-4050, or send an e-mail to: terlaky@lehigh.edu

All the best,

Tamás Terlaky
George N. and Soteria Kledaras '87 Endowed Faculty
Chair

Outgoing Chairs' Message



Dear Alumni, Students,
and Friends,

I am writing to you from Gainesville, Florida, as I took the position of Professor and Chair of Industrial and Systems Engineering at the University of Florida last summer. I thank Interim Chair Greg Tonkay, as well as the new Chair Tamas Terlaky, for allowing me to properly say good-bye.

While Bob Storer claims I headed south to improve my golf game, I wanted you to know that this was not an easy decision. I spent the last 11 years at Lehigh, serving most recently as Chair of the Department while holding the Kledaras Endowed Chair. In that time, I interacted with hundreds of students and a wonderful group of faculty and staff. I will carry those memories for a lifetime.

But life sometimes offers opportunities that we may not see again. When I was approached by the University of Florida, I took it seriously and did my research - and was very excited by what I found. The programs and research here are top-notch and I am excited about this opportunity and its future.

I also thought it was time to try something different. And there is no doubt that Lehigh and Florida are very different! For starters, Florida is public, one of the five largest schools in the nation, and has 16 colleges -- not exactly a small private school in the Northeast. I have learned a lot in my first year here.

Thus, I say good-bye. Thank you, Lehigh, for giving my career a great place to start. All the best in the future.

Sincerely,
Joseph C. Hartman

Welcome to our New Chair, Tamás Terlaky

We are very pleased to announce the appointment of Tamás Terlaky, George N. and Soteria Kledaras '87 Endowed Chair Professor, and Chair of the Department of Industrial and Systems Engineering.

Professor Terlaky received his doctorate in natural sciences and his master's degree in mathematics from Eötvös University, Hungary. He has previously taught at Delft University of Technology, Netherlands, the University of Veszprém, Hungary and McMaster University in Canada, where he has been the Canada Research Chair in Optimization and also served as the founding Director of the McMaster School of Computational Engineering and Science. Dr. Terlaky is founding editor-in-chief of the journal, Optimization and Engineering and serving as associate editor of seven journals. He has been conference chair, conference organizer, and distinguished invited speaker at conferences all over the world. He is a member and former chair of numerous professional organizations, and has served as chair or member of numerous prestigious prize committees. He is a Fellow of the Fields Institute, Toronto, Canada and received the MITACS Mentorship Award for his distinguished graduate student supervisory record. Dr. Terlaky's research interests include high-performance optimization methods, optimization models, algorithms and software, and solving optimization problems in engineering sciences. He has been published three books, edited several books and conference proceedings, and published over 150 research papers.

The department welcomes Dr. Terlaky and wishes him much success during his tenure here at Lehigh University.

Professor Ted Ralphs and Student Take 1st Place in Programming Contest

Professor Ted Ralphs and student Yan Xu won first prize in the first Open Contest of Parallel Programming held at the 19th International Symposium on Computer Architecture and High Performance Computing and sponsored by the organization of the SBAC-PAD'07 Conference, together with SUN Microsystems Brazil and the INRIA project GRID'5000 (<http://www.grid5000.fr>).

Professor Ralphs and Yan Xu's authored a software program which was a parallel traveling salesman problem (TSP) solver comprised entirely of COIN software, and built on the following COIN projects: CHiPPS (ALPS/Bi-CePS/BLIS), CoinUtils, Osi, Cgl, Clp, and BuildTools.

Congratulations Dr. Ralphs and Yan Xu!

Analytical Finance Takes Off!

Since implementing the Analytical Finance Masters Degree program back in Summer 2004 with the departments of Math and Finance, interest in the program has grown at a phenomenal rate! The first graduating class in Fall 2005 consisted of only three students. However, the number of student applicants has risen dramatically: from 28 applicants in Fall 2005 to 219 applicants for the Fall 2008 semester!

Analytical finance is an ideal program for those interested in a career in any financial service sector including investments, banking, insurance, and others. It provides tools in creating innovative solutions for financial problems using state-of-the-art analytical techniques and computing technologies, and combines key concepts in financial theory, mathematical finance, and engineering decision making. Course work is completed within the College of Business and Economics, the College of Arts and Sciences, and the P. C. Rossin College of Engineering and Applied Science.

Upon completion of the program, most students have obtained analyst positions with differentiation in level (senior or unspecified), as well as portfolio managers, traders (hedging and proprietary), derivative product developers, risk managers, and consultants. Employers hiring from the program include companies such as Huron Consulting, GE Energy, Accenture, and BlackRock, just to name a few.

Anyone who may be interested in this program can find out more information by going to <http://www3.lehigh.edu/business/academics/msanafin.asp>.

Aurelie Thiele Receives IBM Services Faculty Award



Professor Aurelie Thiele is a recipient of the 2007 IBM Services Faculty Award for her work in the project "Robust and Adaptive Lending with Risk." IBM announced only 15 such awards to recipients worldwide, including India, Germany, Hungary, China, United States, Netherlands and Uganda, for a variety of topic areas on Services Science, Management and Engineering.

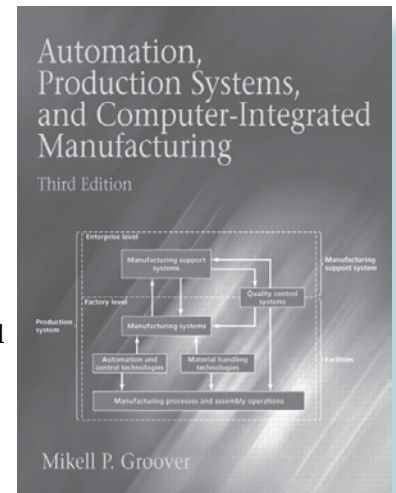
The IBM Faculty Awards is a competitive worldwide program intended to foster collaboration for research purposes and to promote courseware and curriculum innovation. Candidates for the award must have an outstanding reputation for contributions in their field or, in the case of junior faculty, show unusual promise.

Congratulations Professor Thiele!

Mikell Groover Publishes Third Edition of Textbook

Professor Mikell P. Groover published his third edition textbook last year, *Automation, Production Systems, and Computer-Integrated Manufacturing*. In addition to topics in previous editions, this new edition also addresses new and emerging technologies such as radio frequency identification, Six Sigma, lean production, and enterprise resource planning. This book was originally published in 1980 as *Automation, Production Systems, and Computer-Aided Manufacturing*, with a revised first edition published in 1986 as *Automation, Production Systems, and Computer Integrated Manufacturing*. A second edition was released in 2000 (with a copyright of 2001) which brought technical subject matter up to date and encompassed a reorganization of material. On an interesting note, this second edition was recently published by Prentice Hall in Chinese (Taiwan) language and recently released in China.

Congratulations Professor Groover!



ISE Faculty Welcomes New Professors

We are pleased to announce three new additions to our ISE faculty:



Jitamitra Desai, Ph.D. joined our ISE faculty as of July '07 as Visiting Assistant Professor. Professor Desai came to us from his previous faculty position at the University of Arizona. Dr. Desai received both his Ph.D. and Master of Science degrees in Industrial and Systems Engineering from Virginia Tech, and he completed his bachelor's degree at the Indian Institute of Technology, Madras in Chennai, India.

Professor Desai teaches Networks and Graphs, Operations Research, and Optimization Models and Applications. His research interests also incorporate the areas of global optimization, continuous convex and nonconvex optimization problems, along with applications. Dr. Desai serves as the faculty advisor for the INFORMS Student Chapter here at Lehigh University.



Pietro Belotti, Ph.D. joins us in Fall 2008 as a Visiting Professor. Professor Belotti received his Ph.D. degree in Computer Engineering from the Technical University of Milan, Italy, in 2003. He has been postdoctoral fellow at the Technical University of Milan and at the Tepper School of Business at Carnegie Mellon University.

His research interests include Mixed-Integer Nonlinear Optimization and Network Design problems. He has also worked on Relaxation Methods for Linear Programming. His teaching interests are in Linear and Nonlinear Optimization and in the design of Telecommunication Networks.



Imre Pólik is also joining us this Fall as Visiting Professor, coming from his previous appointment at McMaster University, Hamilton, Ontario. Dr. Pólik earned his Ph.D. degree in Mathematics at McMaster University in 2007 under the supervision of Dr. Tamás Terlaky. He received his M.Sc. degree at Eötvös University in Budapest, Hungary.

His primary research interest is in high performance computing and conic optimization. Recently, he has been increasingly more interested in practical extensions of the theory and efficient implementations of the algorithms. Dr Pólik received the 2006 Best Student Paper Award (Ph.D. students) of MITACS, and was a member of Team OptLab winning the 2007 CORS/VISUAL8 simulation competition.

Faculty Updates 2008

John Adams....Our Professor Emeritus continues to teach Product Quality.

Jitamitra Desai....Recently joined our department last year in 2007, with research interests primarily in the areas of global optimization, continuous convex and nonconvex optimization problems, along with applications. He is teaching courses in Networks and Graphs, Operations Research, and Optimization Models and Applications. In 2006, he won the Engineers Week award through IIE, and received first place prize in the NIJ Symposium on OR in the Criminal Justice System.

Keith Gardiner....Presented paper at an ASEE Mid-Atlantic Region Conference at Temple University entitled "Discovery, Learning and Research in a Classroom Factory." Continues to direct the Center for Manufacturing Systems Engineering and the associated cross-disciplinary Master of Science in Manufacturing Systems Engineering program. Continues to serve on the board for the Future City Competition that engages approximately 35,000 7th and 8th graders in 40 regions throughout the United States.

Mike Groover....Released a third-edition book in July '07, *Automation, Production Systems, and Computer Integrated Manufacturing*. Elected to the University Disciplinary Appeals Committee for three-year term. Continues to direct the George E. Kane Manufacturing Technology Laboratory.

Nick Odrey.... Published chapter, "Chapter 14: Error Recovery In Production Systems: A Petri Net Based Intelligent System Approach", in book published by the Journal of Advanced Robotic Systems out of Vienna, Austria, *Petri Net Theory and Applications*. Presented joint paper with graduate student Julie Drzymalski at the FAIM (Flexible Automation and Intelligent Manufacturing) International Conference; also chaired a session at this conference. Work was accepted for publication in a special issue of *Robotics and Computer Integrated Manufacturing* and is entitled "Supervisory Control of a Multi-Echelon Supply Chain: A Modular Petri Net Approach for Inter-organizational Control". Continues research on control of multi-agent systems with embedded Petri Nets with applications for control and coordination of supply chains and production systems. Also continues to serve as the Director of the Automation and Robotics Laboratory. Received "Outstanding Teacher Award" for 2007-2008.

Eugene Perevalov....Teaching Applied Engineering Statistics, Time Series Analysis, Engineering Statistics, and Design of Experiments.

Lou Plebani....Taught courses in Fundamentals of Web Applications, Stochastic Models and Applications, Information Systems Analysis and Design, Systems Engineering Design, and Dynamic Programming.

Ted Ralphs....Received two NSF Grants, and a grant from the US Army, Communication Electronics Research Development and Engineering Center. Published eight papers and had several new software releases of SYMPHONY and CHiPPS; also presented or co-authored 20 conference presentations. Had one graduating doctoral student, Yan Xu, who completed his dissertation "A Framework for Scalable Parallel Tree Search." Appointed to the board of Open Operational Research Journal, and elected Vice-chair for Computational Optimization and Software, INFORMS Optimization Society. Appointed a Fellow at the Institute for Advanced Studies, University of Bologna, for Fall 2008 and will visit the University of Auckland in Spring 2009. Continues to direct the laboratory for Computational Optimization Research @ Lehigh. Serves on the boards of four journals, chairs the Lehigh High Performance Computing Steering Committee, and chairs the Technical Leadership Council of the COIN-OR Foundation.

Larry Snyder.... Awarded joint grant with Professor Zuo-Jun Max Shen (UC-Berkeley) from National Science Foundation for Purchasing and Inventory Management in Disrupted Supply Chains: The Reverse Bullwhip Effect. Continues to direct the Center for Value Chain Research.

Bob Storer....Advised student team taking third place in IIE Competition at Annual IIE Conference. Teaching courses in Simulation both at undergraduate and graduate levels, and also Engineering Probability and Statistics.

Aurelie Thiele.... Recipient of the 2007 IBM Services Faculty Award for her work in the project "Robust and Adaptive Lending with Risk." Taught Optimization Models and Applications for senior undergraduates and Stochastic Programming and Financial Analysis for graduate students in the Master of Science in Analytical Finance (MSAF) program. Also supervised the financial engineering project for the students in MSAF

continued on page 6

Newly Chartered Chapter of the National Society of Leadership and Success

Lehigh University's recently begun its own chapter of the National Society of Leadership and Success in February '08 with 215 motivated members, and even though membership comes from all three colleges, we are proud that the I&SE Department is providing the primary leadership for this new Honor Society.

Dr. Emory W. Zimmers, Jr. is Faculty Advisor. Last year's officers were Victoria Berenholz (IE '08) as President and Michael Ratajczyk (IE '08) as Vice President. Mohler Laboratory's second floor "Collaboratory" is being used as the chapter's physical home. This space is continuing its evolution from CIM Lab (1970s) to CAD/CAM (1980s) to Enterprise Systems Center (1990s) to incorporate its new Leadership and Success-Networking Center. Students will use the virtually connected space to interact with each other and with leaders from organizations across the globe. The opportunities created through society membership will inspire many students to further develop their character and abilities as tomorrow's leaders.

The Society for Leadership and Success at Lehigh University invites alumni insight, feedback and involvement. Participation of our extensive I&SE alumni industry leaders will enable our society to continue to distinguish ourselves among the 140 other members. Lehigh University Trustee and Air Products CEO, John McGlade (1976), started the alumni involvement process with a visit on February 15, 2008 and generated tremendous student interest.

Please contact Dr. Zimmers at ewz0@lehigh.edu to volunteer your ideas, time or financial support.



From left to right: Christopher Martine, Michael Ratajczyk, Professor Emory Zimmers, Jr., John McGlade, Victoria Berenholz, and Nicole Albano).

Did You Know...

...that if you make a contribution to Lehigh University, you can designate it specifically for the Industrial and Systems Engineering department? We are working hard for continuous improvement and ongoing excellence in all aspects of educating our students and performing cutting edge research. We are also on the verge of embarking on making some enhancements and doing some remodeling work here in Mohler Laboratory to offer students additional resources for their learning experience. We are always so greatly appreciative of the support we receive from alumni, industry, and other interested parties. For more information on how you can make your gift go to work for ISE, please contact our Chair, Professor Tamás Terlaky, terlaky@lehigh.edu

Faculty Updates

continued from page 5

and independent engineering projects for seniors. Received NSF grant "Robust Portfolio Management with Uncertain Compounded Rates of Return". Was included in Who's Who in America 2009.

Greg Tonkay...Serves as Interim Chair of the department. Teaching courses in Information Systems Analysis and Design and the ISLEP Honors Seminar. Continues to direct the Electrical and Electronics Manufacturing Laboratory.

George Wilson...Continues to teach in the subjects of Logistics and Supply Chain Management, Production and Inventory Control, Stochastic Models and Applications, and Production Analysis.

David Wu... In his fourth year as the dean of the College of Engineering, David has started a number of initiatives in the College, including the establishment of clusters focusing on bio, nano, and systems research, research exploratory workshops in "Bioimaging and engineered biosystems", and "Balancing energy and the environment." David is leading the effort of two broad based initiatives at Lehigh, one in the area of Biotechnology and Health Care, and the other in the area of Energy and the Environment. David continues to advise three doctoral students. He recently filed a patent application for his work in leading indicator and demand analysis for short life-cycle product. This work is expected to make impact to demand planning in high-tech industries. He has been working with the semiconductor research corporation (SRC), national science foundation, and large semiconductor companies such as Intel, on the testing of his methodologies using real world data.

Emory Zimmers, Jr.... continues his role as site director for Lehigh's National Science Foundation sponsored Center for Engineering Logistics and Distribution (CELDi). Active participant in the National Coalition for Manufacturing Innovation (NCMI) and continues to serve as Principal Investigator on numerous projects under the Commonwealth's Agile Manufacturing initiative. Continues development of the Lehigh University Leadership Minor and overseeing the Senior Project course.

New Leadership Minor Joins Forces with the Enterprise Systems Center

A new dimension has been added to the Enterprise Systems Center (ESC) to help prepare our students for leadership beyond Lehigh. The Center is now serving as the physical site for the Leadership Minor and the new Lehigh Chapter of the National Society for Leadership and Success established in February 2008. Part of the inauguration ceremonies included a visit by 1976 Lehigh IE alumnus John McGlade, CEO of Air Products and Chemicals, Inc. John visited the ESC after attending the February Lehigh Board of Trustees meeting to talk to students from all colleges who worked hard to establish the Leadership honor society at Lehigh (see picture page 6).

For many years the Enterprise Systems Center has served to enrich the educational experience of Lehigh University students through meaningful experiential learning. For example, ESC's approach is differentiated by at least one important factor. Students work on teams that include seasoned practitioners and they are critically involved in real industry projects. Dr. Emory W. Zimmers, Jr., Center Director, believes that because their work output is important to the company and is often put to immediate use, the level of professionalism and excitement surrounding the Center is contagious. Often, student confidence and enthusiasm created by tangible accomplishments provides significant advantages during subsequent job interview situations.

Dr. Zimmers states that "the ESC will continue to evolve based on industry and university demands for increased globalization and interdisciplinary collaboration to prepare Lehigh University students for leadership positions through experiential learning and state-of-the-art instruction."

Center for Value Chain Research Holds Symposiums



The Center for Value Chain Research (CVCR), a business-engineering joint research center and an extension of both the Industrial and Systems Engineering department as well as the College of Business, held two symposiums during the past year and has another coming up this November.

The CVCR Fall 2008 Symposium on “Sustainable Supply Chains--Making the Case for Going Green” will be held November 3-4, 2008. The event will start with a networking dinner on November 3, followed by a full day of presentations and discussions on November 4. An impressive list of speakers has been assembled from Volvo, Mars, Merck, ProLogis, Genco, and other well-known companies. The event will be co-sponsored by the Council of Supply Chain Management Professionals (www.cscmp.org). Visit www.lehigh.edu/cvcr/symposium for more information.



The Spring 2008 symposium entitled “Supply Chain Optimization for Speed, Agility, and Efficiency” was held May 13-14, 2008, and was attended by nearly 200 people from 79 different companies. Featured speakers included executives from LogicTools (a division of ILOG), Johnson & Johnson, JustBorn, Air Products, Gross & Associates, General Electric, and Hersheys, as well as Dr. Larry Snyder from the ISE department here at Lehigh. More information such as abstracts, presentation slides and photos for this symposium can be found at <http://cf.cc.lehigh.edu/cvcr/sympSp08.cfm>.

CVCR’s Fall 2007 Symposium, held November 6-7, 2007, focused on the theme “Transforming Lean from Theory to Practice”. The event was kicked off on the evening of November 6 with a networking and student recruiting dinner held at the Bethlehem Brew Works. The symposium continued the next day with six separate sessions featuring industry speakers from Supply Chain Visions Hytrol Conveyor Company, Inc., The Hershey Company, Hewlett Packard, and Boeing. More details on this symposium can be found at <http://www.lehigh.edu/~inchain/SymposiumFall07/index.html>.

Amanda Schmitt Wins SOLE Dissertation Proposal Award

SOLE, The International Society for Logistics (www.sole.org) awarded their Doctoral Dissertation Proposal Award for 2007 to one of our own Ph.D. graduates, Amanda Schmitt. This is quite an accomplishment by Amanda since the organization awards only one per year out of all Ph.D. candidates worldwide. Amanda won it for her dissertation material, which is titled Strategic Inventory Management for Supply Chains Subject to Supply Uncertainty. She was presented with the award at SOLE’s annual conference in Pittsburgh in August 2007, where she also gave a talk on her thesis material. Amanda was supported by her faculty advisor, Professor Lawrence V. Snyder.



Amanda successfully defended her dissertation in December and received her Ph.D. degree in May 2008. She is currently doing post-doctoral research at the Massachusetts Institute of Technology. Her web site is www.lehigh.edu/~ajs404. Congratulations Amanda!

Graduation Rates Increase

During calendar year 2007 and up through September 2008, our department has awarded a total of 166 degrees. An predominant increase has been seen in the amount of graduate degrees awarded, which almost doubled from twenty-one in 2006 to forty in 2007, and then forty-eight in 2008. Of the graduate degrees awarded in 2008, eleven were Ph.D's, and thirty-seven were Masters.

Just a sampling of employers who have hired our recent graduates include companies such as Proctor & Gamble, KPMG LLP, Sanofi Pasteur Pharmaceuticals, Merck & Co., Inc., Ely Lilly & Co., Apprise Software, Miller Brewing Company, GlaxoSmith-Kline, Air Products, Binney & Smith, Capgemini, Flowserve Corp., and Guardian Insurance. In addition, a number of our Ph.D. graduates have gone onto professor or post-doctoral positions at universities including MIT, University of California at Berkeley, University of the Thai Chamber of Commerce, and Western New England College. Good luck to all our ISE graduates!

Undergraduate Team Places in IIE Competition

Undergraduate students James Beattie, Tyler Espenlaub, and Orest Pasichnyk took third place with their simulation project at the 2007 Annual IIE Conference in Nashville, Tennessee. Under the advisement of Professor Robert Storer, the team successfully completed the first portion of this two-part competition in March 2007, and subsequently was one of only five teams internationally that was invited to the finals in Nashville. The other four teams competing in the finals with the Lehigh team were from Columbia, Mexico, South Korea, and one other team based in the U.S.

The team's project consisted of working with the Arena software to simulate the movement of passengers through an airport terminal. The process required the analysis of walk times, queuing times, and the process time for the security checkpoint and check-in counter. The overall project was based from the students' IE 305 Simulation course and the competition was open only to current undergraduate students.

Congratulations to James, Tyler, and Orest for their hard work and effort!

Students Win Award in Supply Chain Competition

On November 16, three doctoral students in the department, Mehmet Atan, Zumbul Bulut, and Gokhan Metan, took part in the Supply Chain Case Competition at Rutgers Business School. The judges were very impressed by their analysis of the business problem and the students received a \$200 award.

The Lehigh students presented a case regarding analyzing supply chain problems encountered in a consumer health care product company. The data supplied in the case study indicated a potential problem with inventory levels (possibility of excess inventory). The team's objective was to decide whether a problem in inventory levels actually existed, and if so, to present potential solutions to eliminate the problem.

The competition judges remarked that they were quite impressed with the students' analytical abilities and originality, and were very well pleased with the team's presentation as well as their proposed solutions. The twelve judges were from top management ranks at large corporations, predominantly from supply chain management and finance organizations.

INFORMS Colloquia

Lehigh's ISE department was extremely well represented at the 2007 INFORMS Combined Colloquia at the INFORMS 2007 Annual Meeting in Seattle, Washington (<http://meetings.informs.org/Seattle07/colloquia.html>). With an unprecedented eight Ph.D. students from our department participating, this is an unusually high number for any college or university to have accepted. Because of increased demand and limited capacity, participation in the colloquia has become very competitive and is by nomination only. Once nominated, the individuals must then be accepted by the INFORMS colloquia committee. We'd like to think our high rate of student acceptance at this colloquia speaks to the high caliber of training and the outstanding level of quality of our Ph.D.s.

The colloquia are sponsored by INFORMS, INFORM-ED, and the INFORMS Student Affairs Committee, and are designed to provide the attendees with technical material, career experiences from senior and junior OR/MS professionals, and an environment for networking.

The Lehigh PhD students and the specific colloquium each participated in were:

Scott DeNegre	Future Academician Colloquium
Menal Guzelsoy	Future Practitioners Colloquium
Gokhan Metan	Future Practitioners Colloquium
Rockey Myall	Future Academician Colloquium
James Ostrowski	Future Academician Colloquium
Banu Gemici Ozkan	Future Practitioners Colloquium
Ying Rong	Future Academician Colloquium
Amanda Schmitt	Future Academician Colloquium

Congratulations to all!

INFORMS Student Chapter

The INFORMS Student Chapter here at Lehigh University is a group of primarily graduate students studying Operations Research in the ISE department. We are interested in a variety of issues including: optimization, mathematical modeling, statistics, simulation, manufacturing, scheduling, and others topics important to our profession, while mixing some fun into the process! The goal of the chapter is to hold meetings and seminars where we like to bring in presenters from around the campus and industry, as well as researchers to talk about their research and related activities. We are currently working on obtaining a highly distinguished speaker from either academia or industry, to come in during the Spring semester. The group is also working on some fundraising activities for the year.

Our roster currently is at 50 student members, with faculty advisors Dr. Jitamitra Desai and Dr. Ted Ralphs. Officers of the chapter are:

Cagri Latifoglu, President
Camilo Mancilla, Vice President
Julio Goez, Treasurer
Dan Scansaroli, Secretary

Although chapter membership is limited to students only, other people who may be interested in further information about seminars can contact Cagri Latifoglu at cal206@lehigh.edu.

Undergraduate Enrollment is Up

The number of undergraduates choosing a major within the Industrial and Systems Engineering department has increased substantially within the last few years, increasing overall by 24% compared to 2006 enrollment and more than doubling from 2005 enrollment figures. The biggest jump was seen in Information and Systems Engineering (ISE): incoming 2007 sophomores increased by over 40% from 2006 including students entering both the ISE degree program and selecting ISE as an option within the Integrated Business and Engineering program. Engineering students selecting Industrial Engineering (IE), again including numbers from both the IE degree program and IE as an option within the Integrated Business and Engineering program, has increased over 14%.

Staff Updates

Kathy Rambo, Department Coordinator
kgr0@lehigh.edu

Kathy is our Department Coordinator, responsible for processing and coordinating anything to do with undergraduate students within ISE such as registration, class schedules, and textbook orders, just to name a few. She also works as an administrative assistant to the department chair, handling items such as the chair's schedule, managing budget issues, and ensuring that the department meets deadlines and runs smoothly.

Kathy has been a member of the Industrial and Systems Engineering Department for thirty years and has been through several department name changes and department chairs along the way. She started working in the Industrial Engineering Department with Faith Newhall in June 1978 when it was housed in Packard Lab. The department then moved into our current home in Mohler Laboratory in January 1988 (during a severe ice storm). Kathy has many fond memories of all the great people she has worked with over the years, and continues to be proud of the department and the accomplishments the Lehigh ISE community continues to achieve.

Thanks to Kathy for all her years of hard work and dedication to ISE!

Rita Frey, Graduate Coordinator
rrf0@lehigh.edu

As the graduate coordinator in the ISE Department, Rita is responsible for the entire graduate application process which begins with the initial inquiry from a prospective graduate student, to processing the application, coordinating the offers of admission, and assisting graduate students with their arrival at Lehigh. She continues to support all graduate students during their time here at Lehigh including maintaining their student files, processing all graduate forms, and ensuring that all graduation requirements are met. She works closely with other departments at Lehigh to coordinate various procedures such as course registration, and ensures that all departmental and university guidelines are followed. Rita also provides secretarial and administrative support for the ISE Department and faculty, keeps students informed of important information and deadlines, and tries to keep everyone happy!

Rita began working at Lehigh in the History Department on a part time basis in 1990. She has been in her current position for over 14 years. She really enjoys working in an academic atmosphere and appreciates the interactions with students and faculty. She is hoping that upon reading this, that some of the former graduate students will send a short update on how they are doing since graduating from our department.

Thank you Rita for your dedication in supporting our graduate students!



From left, Kathy Rambo, Rita Frey, Jane Kline and Ed Force

Ed Force, Engineering Technician
ewf1@lehigh.edu

Ed has been with Lehigh University since 1983, originally hired to support the Manufacturing Systems Engineering Program (MSE) and Robotics/ Automation. He has become a full time specialist in Manufacturing and a member of many private and specialized/social organizations. He became a member of the Industrial Engineering Department team in 1991.

He supports all hands-on classroom and laboratory equipment associated with ISE and IE curriculums, consulting with faculty, staff, students, and outside contracting firms on apparatus priorities that will enhance and inspire junior and senior engineers.

Thanks to Ed for his hard work in supporting the department's technology needs.

Jane Kline, Communications Coordinator
jlk205@lehigh.edu

Jane has been with the ISE Department for four years now, and continues to be responsible for marketing communication materials (such as this newsletter) to facilitate contact and communication with alumni, students, educational organizations, and sometimes industry. Besides the newsletter, Jane publishes items such as the annual report, student testimonial pamphlets highlighting ISE to engineering freshmen, and manages the department's website. She supported the IGERT PhD students until the program ended in summer of 2007, and she also assists in other departmental functions on an as-needed basis such as helping with ABET initiatives.

In addition to being a staff member, Jane is also an alumnus of Lehigh University, getting her MBA from the College of Business back in 1999.



Industrial and Systems Engineering

Harold Mohler Laboratory
200 West Packer Avenue
Bethlehem, PA 18015-1582

Non-Profit Org.
U.S. Postage
PAID
Permit No. 230
Bethlehem, PA 18015

WE WANT YOU... **To Keep in Touch!**

As always, the ISE department would love to hear from our alumni on things such as what you're currently doing, where you're working, and anything else you might wish to share. In addition, the ISE department is making plans to renovate our lobby here in Mohler Lab, and included in those plans is the implementation of an electronic display sign. Among other things that go up on this electronic display, we would like to include short articles about our alumni on either what they're doing now, or, brief stories about some of their remembered ole' times at Lehigh.

If you would like to provide any of this type of information to us here at ISE, please email Jane Kline at jlk205@lehigh.edu. Thank you!