Kate Gleason College Of Engineering R•I•T
enginuity

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Dean's Corner


Dr. Harvey Palmer

Welcome to the premier issue of ***Enginuity***, a newsletter for alumni and friends of the Kate Gleason College of Engineering. It signals our renewed commitment to stay connected with you, our alumni, the most significant outcome of the collective efforts of the faculty and staff.

These certainly are exciting times for RIT and the KGCOE. I joined RIT in July 2000, attracted by the energy and enthusiasm that pervades the College: the sense that here "everything is possible." My transition to RIT was effortless, due to the strong sense of community within the College and the total commitment to excellence in undergraduate engineering education – a quality that I value highly. We are on the move, with new programs and directions. But we will never lose sight of our core mission: career-oriented engineering education.

As you probably know, the James E. Gleason building received a major face lift in 1999-2000, with the addition of 30% more space, including some dedicated to student

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RIT Launches Microsystems Engineering Ph.D. Program

First-in-the-nation program focuses on micro-, submicro- and nano-technology in biomedicine, electronics, imaging, optics and telecommunications

The Ph.D. program in Microsystems Engineering has been many years in the making. Leveraging the many strengths of the College, including its exceptional clean-room for micro-fabrication, the program focuses on the explosive growth and promise of nanotechnology to revolutionize products and services far into the future. Approved by the New York State Department of Education in October 2002, the doctoral program already has a Director, Mustafa Abushagur, and eleven matriculated students.


Dr. Mustafa Abushagur

Dr. Abushagur joined RIT in the fall after a distinguished academic career at the University of Alabama, Huntsville, where he established the nation's only ABET accredited BS program in optical engineering. He has published over 100 peer-reviewed journal articles and conference presentations in the field of applied optics, optical networks and photonic systems. Mustafa earned his Ph.D. in electrical engineering at Cal Tech in 1984, and has two start-up companies to his credit, both dealing with optical components and systems for telecommunications.

Mustafa describes microsystems engineering as an "enabling technology" that enhances biomedical diagnostics and treatment, electronics, imaging, optical and wireless communication, and other telecommunications applications. The new program incorporates engineering studies in electrical, mechanical, optical, chemical, computer, industrial/systems, microelectronic and software disciplines, along with imaging science, materials

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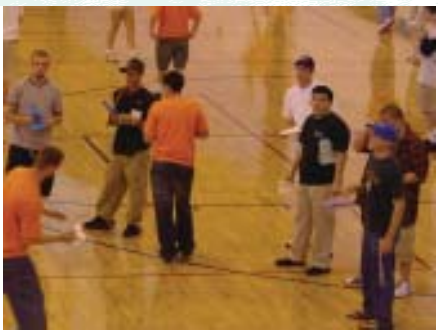
Is this the Kate Gleason College of Engineering that you remember?



Popcorn in Erdle Commons? The aroma of coffee and donuts wafting through the air? Paper airplanes flying through the corridors?

In September of 2001, the KGCOE established the Office of Student Services. With this initiative came popcorn days, coffee and donut mornings, even an engineering day with a design competition for all 500-entering freshman. What appears on the surface to be just fun and games actually serves a variety of purposes all focused on helping students succeed.

The dedicated staff of the Student Services Department provides a solid foundation that compliments other resources and imparts incremental support, advice, and counseling for all engineering students.

The Student Services Staff interact with students in a variety of ways. They help students form study groups, develop strategies for considering alternative careers, improve study habits, identify and solve academic problem areas, and much more. Most importantly, the staff offers a warm, open and friendly atmosphere in which students can feel comfortable discussing any concerns they might have.

While dealing directly with current student problems, the Student Services staff also looks at the issues they see every day in a proactive way. They have been charged with identifying key retention strategies and creating a success oriented environment within KGCOE for all students.

With a primary objective of ensuring academic success, the Student Services Office strives to help students find the keys to succeed in all aspects of life, now and in the future.

From left to right: Bert Gamory–Coordinator MEP, Eileen Fishman–Student Counselor, Fredda Bishop–Student Counselor, Karen Hirst–Sr. Staff Assistant, Margaret Anderson–Assistant Dean

I Built My Computer @ RIT.

Excitement, anticipation, anxiety, fear – young people embarking on their college careers experience a wide range of emotions. Imagine what a young woman entering the Kate Gleason College of Engineering must feel as she looks into the faces of her classmates and perhaps finds not one other female. Imagine too that she is seated in an engineering lab surrounded by a sea of unfamiliar tools, machines and equipment. One shouldn't assume, however, that every male freshman is on terra firma in a lab setting either.

Nevertheless, studies have shown that female engineering students often feel intimidated in labs during their first year. To address this issue, a committee consisting of Dr. Jacqueline Mozrall, Head, Industrial and Systems Engineering; Dr. Jayanti Venkataraman, Professor, Electrical Engineering; Dr. Risa Robinson, Assistant Professor, Mechanical Engineering; and Mark Chast, Computer Support was charged with finding a way to give incoming female students some lab experience and a healthy boost of confidence prior to the start of fall classes. Margaret Anderson, Assistant Dean, chaired the committee and originated

the idea for **I Built My Computer @ RIT**. Four upper level engineering students, Kira Mikels, Laurel Haydock, Heather Wold and Melissa Zaczek served as mentors for the 21 young women who attended the workshop.

The computer served as the central theme during the three-day skills and confidence-building workshops on campus in August. Participants worked on engineering lab equipment, used hand tools and developed friendships with classmates and faculty. Working in teams of two, they built their own computers from the circuit board up. They increased their knowledge of the inner workings of the computer, and learned how to perform upgrades and to troubleshoot.

All the young women left the campus with a strong network of classmates, faculty and staff as well as increased confidence in their ability to tackle the demands of our challenging engineering programs. And they left with their own computers, built with their own hands!

The young women paid a small fee to attend this workshop. Xerox Corporation, Microsoft, Inc., and Intel Corporation underwrote much of the expense. "We are all very grateful for their generous support of this program," said Margaret Anderson.

" I built my computer and my friends at RIT. I learned hardware and how to take it apart. I learned software and how it puts everything together. I learned never to leave home without your toothbrush"

Emily Iannello

Robert O. Frasca Selected as KGCOE Distinguished Alum for 2002

Every year each college at RIT has the opportunity to present the Distinguished Alumnus Award to one outstanding alum who has brought distinction to the college and RIT through professional and/or community achievement. In 2002 the Kate Gleason College of Engineering selected Robert O. Frasca as the recipient of this prestigious award.

Rob received the B.S. degree in mechanical engineering from RIT in 1988 and an MBA from Carnegie Mellon University Graduate School of Industrial Administration in 1994. After a stellar college career, Rob continued to distinguish himself in business and industry, and in the military.

From 1988 to 1994, Rob flew S-3B Vikings, a sea strike and reconnaissance tactical jet, for the U.S. Navy aboard the aircraft carrier U.S.S. Forrestal. As the number one ranked naval flight officer in his squadron, he specialized in electronic/ surface strike warfare operations. On active duty in Desert Storm, he planned over forty reconnaissance and attack missions and flew eighteen combat missions.

An Internet pioneer, Rob was a cofounder and former Chairman and CEO of GALT Technologies, one of the first companies focused solely on e-commerce. He guided GALT's NETworth investment website from inception to become one of the premier Web finance destinations before selling the company to Intuit in 1995.

As part of the senior management team at Intuit, Rob was critical in helping to define the company's Internet strategy, making Intuit one of the top investing portals on the Internet. Additionally, he was responsible for Internet business development including deal origination, deal evaluation, and structuring and management of Intuit's Internet investment strategy.

"My years at the College of Engineering provided me with an outstanding foundation for success - academically, professionally, and personally."

Rob Frasca

Internet Capital Group (ICG) recruited Rob as Executive Vice President of WiseWire Corporation, an early-stage start-up technology company. With responsibility for operations, product development, product marketing, and quality assurance, Rob was instrumental in positioning WiseWire's intelligent agent software as a leading

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Introducing

Dr. Robert J. Bowman

Professor and Department Head, Electrical Engineering Department

Ph.D. – University of Utah. Most recently, Director, Analog and Mixed-Signal Design, LSI Logic, Inc., Fairport, NY. He has consulted for or held engineering positions with IBM, Siemens Corp., Analog Devices, Chevron Research, Eastman Kodak Company, and Mint Technology. He has held faculty positions at the University of Utah, the University of Vermont, and the University of Rochester. He has been a practicing analog integrated circuit designer for over 30 years and his areas of interest include analog integrated circuit design and technology, analog circuit design automation, semiconductor device physics, and biomedical instrumentation. His work has covered many topics including data acquisition and control, microwave communications, optical computing, laser drivers, CD and DVD data channels, cryogenic electronics, critical care instrumentation, FET device modeling, mixed-signal simulation methods, high speed data transceivers, bar code scanners, high speed data conversion, and active filter design.

Transporting Engineering Students to the Real World

The Kate Gleason College of Engineering has a long history of preparing students for success in the world of work by offering outstanding academics and valuable work experience through our co-op programs. We now provide our students with another opportunity to get "hands-on" experience to enhance their classroom learning.

Dr. Moises Sudit, Director of Business Development and Multi-Disciplinary Programming and Visiting Professor (SUNY Buffalo), develops projects that bring together the creative energy of our students with area businesses looking for solutions to complex problems. It is a classic win-win situation. Here's one example.

The commercial transportation industry in the United States is becoming more complex with a global economy and the tragedy of 9/11. The need for efficient, economical, and safe transportation of goods in our country brings about difficult decision-making problems that require engineering models and techniques to obtain satisfactory solutions.

CSX, one of the largest railroad companies in North America, wants to improve its competitive edge in the transportation of commercial goods. Through an independent study course, RIT engineering students apply their keen analytical skills to a number of problems at CSX. The solution methodology they use is multidisciplinary in nature and the goal is to find efficiencies that will make CSX more competitive in a very dynamic and global marketplace. From logistic issues to the installation of special equipment in the trains to improve safety, our students experience the breadth and depth of corporate challenges while working in a collaborative atmosphere with other colleges and the transportation industry.

During the independent study phase of the project with CSX, students analyze the optimal location of an Internodal (multiple modes of transportation) Center. The visionary approach of CSX demonstrates the beginning of a new era for transportation companies as they work closely with universities to solve complex problems that affect their bottom line. Moreover, this unique experience for RIT students allows them to witness the entire problem solving process - from the tedious tasks of obtaining data to the use of sophisticated mathematical models to seeing the success of their project.

Introducing

Dr. Sergey E. Lyshevski
Gleason Professor, Electrical Engineering Dept. Ph.D. - Kiev Polytechnic Institute, Ukraine. Most recently Associate Professor, Dept. of Electrical and Computer Engineering, Purdue University.

Dr. James E. Moon
Associate Professor, Electrical Engineering Department. Ph.D. – University of California at Berkeley. Most recently, Fabrication Manager, Kionix, Inc., Ithaca, NY. Previously held various engineering positions at Eastman Kodak Company.

Dr. Dorin Patru
Assistant Professor
Electrical Engineering
Ph.D. – Washington State University

Dr. Syed S. Islam
Assistant Professor
Electrical Engineering . Ph.D. – University of Connecticut

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community-building technology for the Web. His role in strategy development led to the negotiation and ultimate sale of WiseWire to Lycos in 1998. At Lycos, Rob became the Vice President and General Manager of Lycos.com reporting directly to the CEO. Under his leadership, Lycos.com became the second most visited portal on the Internet and the world's largest on-line community.

Rob is currently CEO and President of Affinova, Inc., a high tech start-up company created to significantly improve the success rate of the new product development process. Affinova's Interactive Design by Evolutionary Algorithms (IDEA™) technology enables product developers, designers, and researchers to take advantage of their best resource—their customers. Based on this breakthrough and patent-pending technology, Affinova enables customers to guide the product designer towards product and package designs that best fit their preferences.

Rob often speaks at investment conferences and has been featured in several publications, including the *New York Times*, *The Wall Street Journal*, the *San Francisco Chronicle*, and *Newsweek*. He has guest lectured at Harvard Business School, Carnegie Mellon Graduate School of Industrial Administration and MIT Sloan School of Management.

The Kate Gleason College of Engineering is proud of Rob and his achievements—and very proud to have played a role in his success.

Introducing

Dr. Shanchieh Jay Yang
Assistant Professor,
Computer Engineering
Ph.D. – University of Texas at Austin

Dr. Fei Hu
Assistant Professor
Computer Engineering
Ph.D. - Clarkson University

Dr. Sean L. Rommel
Assistant Professor,
Microelectronic Engineering
Ph.D. - University of Delaware

Dr. Benjamin Varela
Assistant Professor,
Mechanical Engineering
Ph.D. - New Mexico State University

Brick City Festival 2002