Kate Gleason College Of Engineering

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Summer 2004

Alumni Newsletter

Dean's Corner

It truly has been an exciting year for the College. Enrollments continue to grow: The number of undergraduates has increased over 30% over the last five years, and our current headcount is estimated to be 2000 undergraduates and 400 grad students. A standing-room-only audience in the ice arena at last year's commencement ceremony clearly indicated that we had outgrown that space. Fortunately the new Gordon Field House was approved for occupancy just in time for this year's KGCOE graduation last month, and we took full advantage of the vastness of this space. Needless to say, the rapid growth of our programs in combination with some key educational initiatives has put a significant strain on our facilities, which, when extensively renovated just four years ago, were thought to be more than adequate to meet our needs well into the future.

Excellent progress is being made on our initiative to re-engineer our curriculum to provide our graduates with a comprehensive understanding of the product development cycle through a capstone design experience involving multidisciplinary teams, industry-inspired problems, and best practices for team-based project management. (Please see the article about Prof. Stiebitz on page 3.) I am pleased to report that nearly 75% of our graduating seniors participated in the program this year – the second year of the program.

Thanks to the generosity of the Gleason Foundation and the Brinkman Family Foundation, we now have 85% of the funds required to create a unique educational

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Alumnus Goes Full Circle

From co-op worker to co-op employer

Engineering Operations Director, Chief Electrical Engineer, Project Engineer, Mentor, Board Member, RIT Alumnus – Ted Fowler, P. E., wears many hats, and all very successfully.

Ted Fowler, Electrical Engineering '79, was drawn to RIT because of the co-op program and the College of Engineering's strong academic reputation. The college made good on its reputation. The professors took interest in the students and taught courses on topics that the students desired. The classes were often small and he learned about real-world problems and solutions. He developed thought processes that helped him determine how to attack a problem, follow through, figure out why a particular solution worked best, and how to sell others on his ideas. The co-op program introduced him to the business world.

One of Ted's first co-op experiences, working as a draftsman at Cannon Design, led to a life-long career. He returned to co-op for Cannon Design several times and then went to work full time for the architectural and engineering firm upon graduation in 1979. From humble beginnings in lighting design, he has made the most of his experiences and is now a senior partner in the firm, seeing it grow from 150 employees to 625.

When Ted first started working full time at Cannon Design he concentrated on healthcare facilities, a specialty of the firm. According to Ted, "If you can do healthcare engineering design, you can do anything."

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Honors Program Really Going Places

Twenty third-year engineering students and eight faculty and staff traveled to Paris and Rennes, France, in late February as part of the KGCOE Honors Program. Along with all of the tourist spots, the group visited Alstom, Inc., a manufacturer of high speed trains; Ouest-France, France's largest newspaper publisher; Transpac: Equant, a telecommunications company; and Rennes' subway Surveillance Center in Chantepie, France. The theme of the engineering honors program is "product innovation in a global economy." Students observed how the local culture impacts the way business is conducted in an international setting versus the way it is done in the U.S. They also visited the National Institute for Applied Science in Rennes and found that, for students, some things are the same the world over – cramming for tests, meeting deadlines, and struggling to learn new concepts.

Third-year students in Rennes, France

Since Rennes is Rochester's Sister City, the group received red-carpet treatment and attended a reception in the Parliament Building with the Deputy Mayor. The Commercial Attaché for the United States Consulate entertained them with an in-depth historical tour of Rennes.

Sstudents at the National Institute for Applied Science in Rennes

Concurrently, twenty-nine second-year honors students traveled to Seattle during the winter/spring break to visit seven companies. The students visited Phantom Works - Boeing's military division, Sage - manufacturers of fly fishing rods, Boeing's mammoth commercial aircraft assembly plant, Sea-Tac Airport, Microsoft, Paccar's Kenworth Division- manufacturer of heavy and medium duty trucks, and Fluke - maker of electronic test tools and software. They saw firsthand great diversity in company size and culture. They learned about the voice of the customer, how the companies work in teams, apply lean manufacturing principles, and adjust for new technology and new products in a global environment.

Second-year students visit Boeing

Here are some of the random facts that piqued students' interests from the trip:

- Sage designs fishing rods specifically for certain rivers in Europe.
- The required specification for the time to take out and replace two engines in Boeing's new FA-22 is 90 minutes.
- The people at Microsoft look like they just walked out of Computer Science House.
- Paccar has turned a profit for the last 64 years.
- Fluke just won a court case that gave them "trade dress" rights to the yellow and gray appearance of their products.

Perhaps honors student David Blonski expressed the sentiments of many when he stated, "I cannot say enough about the trip to Seattle. It has truly helped me to open my eyes and see what I want out of a company and a career. Moreover, it has taught me to grab onto an opportunity no matter how far away it may be. I can only hope that our international trip in March of 2005 will be as exciting and beneficial."

You cannot depend on your eyes when your imagination is out of focus.

Mark Twain

Twinkie Tossing Teens

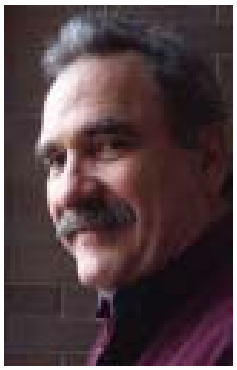
Forty-seven young women from across the Northeast, all high school juniors, participated in an overnight program to learn more about engineering and RIT. The students experienced college food, stayed in the dorms, and attended a class. They also performed hands-on activities in several labs, which included launching Twinkies from a catapult, programming robots to perform predetermined tasks, and soldering circuit boards to build a love meter. The participants also worked in small teams to design and build an egg catcher device that needed to ensure the survival of an egg dropped from a three-story height. RIT student members of the Society of Women Engineers (SWE) made all of the arrangements and served as role models for the high school students. This program, now in its fourth year, is a critical element in the College's outreach program to encourage talented women to pursue an engineering career and to choose the Kate Gleason College of Engineering for their studies.

Vinny and the Circuit Breakers play for an enthusiastic and appreciative audience of graduates, families, friends, faculty and staff at the Senior Design Poster Display and Reception on May 21, 2004. From the left: Paul Casale, '91; Ken Snyder EE Facilites Manager; Dr. Vinny Amuso, Assistant Professor; Jim Stefano, EE Systems Administrator.

Paul Stiebitz Appointed Director Multidisciplinary Engineering Design Program

Paul Stiebitz has been appointed Director of the new Multidisciplinary Engineering Design Program in the College effective immediately. "The creation of this program is a logical extension of the remarkable progress the College has made over the past two years toward crafting and implementing a comprehensive, interdisciplinary capstone design initiative as a key element of its core curriculum," states Harvey Palmer, Dean of the College. As Director, Paul will expand upon his close association with the program while retaining his responsibilities as Associate Professor of Industrial & Systems Engineering. Paul brings to this new position a broad spectrum of knowledge, talents, and experience that will be invaluable as we all work together to make this college-level initiative a distinctive element of engineering education at RIT.

Recognizing Excellence



The faculty and staff of KGCOE are delighted to see Dr. Alan Nye recognized for his outstanding commitment to RIT's Formula SAE team. Alan received the 2004 Excellence in Engineering Education Award from the SAE International during the SAE 2004 World Congress in Detroit. Since 1991 Alan has provided enthusiastic leadership for our students as they build and race formula cars. RIT's team has enjoyed many successful competitions over the years due to dedicated students and Alan's guidance. Alan states, " I get as much out of working with the students as they do. I'm delighted to receive this award, but the real reward is being a part of their success." Alan was also recently elected to the board of directors of the Society of Automotive Engineers.

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Ted Fowler Goes Full Circle

Healthcare is still featured in his portfolio, which has grown to include educational facilities, corporate buildings, power plants, and much more. Ted holds accreditation from the National Council of Examiners for Engineering and is licensed in 21 states and the District of Columbia. He has received many local, regional and national awards, such as the Owens-Corning Energy Conservation Award, the New York City Chamber of Commerce Design Award, the American Planning Association Outstanding Planning Project for Public Facilities Award, and four awards from the Illuminating Engineering Society of North America.

From top-left to right: Michael Ohar, BS EET co-op (in progress '06), Craig Jones, BS EET '03; Ray Schultz, BS ME '89; Rob Garra, BS EE '00; Ted Fowler, BS EE '79; Steven Galley, BS EET '97; seted: Valerie Sirianni, BS-CET '03; Peter McClive, BT EE '81; Joseph Robins, BS EE '89.

Ted gains much satisfaction from seeing a project through from conception to completion. He likes to be active in multiple projects and recognizes the importance of keeping current in the field and with technology.

Helping the company grow, especially in the engineering area, interests Ted immensely. The privately held company has multiple offices from coast to coast. Some of the offices feature more of the architectural arm of the firm than the engineering – leaving plenty of room for growth in his area.

Under Ted's guidance, Cannon Design remains an active participant in RIT's co-op program, continues to hire RIT graduates in engineering and engineering technology for his group, and promotes the program for other departments. Consistent with the co-op philosophy, mentoring is one of the firm's most important initiatives and this program was formed by an ad hoc committee in which Ted played an active role. Values such as honesty, self-respect, mutual support, and accountability to each other are as important as technical skills at Cannon Design and Ted passes these attributes on to his engineers and co-op students as well. These values support a mission of being the best project delivery firm in the business.

Ted enjoys a rich personal life as well. He and his wife of 25 years have three daughters, all in college. He also finds time for fishing, model trains and building model houses for that platform, reading Tom Clancy novels, and working around the house as his own handyman.

Ted has this advice for our graduating class, "Find a job you like. If you don't like going to work, move on. Find your own niche and ask questions. Go after your dream and get involved."

Save the Date

Brick City Festival O

On that weekend the Kate Gleason College of Engineering and the
one-hour professional development units to help you fulfill the Ne
More detailed information will be forthcoming and

KGCOE Colloquium Evolving to Distinguished Speaker Series

Over the last four years, a special speaker series has evolved in the Kate Gleason College of Engineering. In the first year of the KGCOE Colloquium Series, we invited faculty to present to each other on topics in their areas of expertise. The goal in the inaugural year was to provide an opportunity to bring faculty from different departments together to learn, to network, and to initiate collaboration. A number of interesting talks (e.g. "A Conversation on Effective Teaching", "Sustainable Design and Remanufacturing", "Artificial Immune Systems", and even "Why Shakespeare's Richard III Would Be an Excellent Dean") complemented with pizza and soda seemed to achieve that goal.

In subsequent years, the colloquium series has adjusted its focus to include experts from outside of RIT.

> As Dean Palmer explains, "We needed to expand our horizons, learn more about what is going on at other universities and companies at the cutting edge of our disciplines. We also wanted to show off all the exciting stuff that is going on in the KGCOE and the high quality of our facilities."

Here is a sampling of some of the topics and speakers who have participated in the colloquium series over the last three years:

"Fluid Instabilities in Micro-electromechanical Systems"
Dr. Gilbert A. Hawkins
Head, Integrated Materials & Microstructures Laboratory
Eastman Kodak Company

"Optimizing External Beam Radiation Therapy for Cancer"
Dr. Ronald L. Rardin
Program Manager, Operations Research & Service Enterprise Engineering
National Science Foundation

"Pushing the Boundaries in Mixed-Signal Design"
Mr. Jeffrey Scott
Vice President of Engineering
Silicon Laboratories

"Social Problem-solving in Computers: The Particle Swarm"
Dr. James Kennedy
U.S. Department of Labor
Washington, DC

"The Wireless Revolution: Telecommunications for the 21st Century"
Dr. H. Vincent Poor
Princeton University

"Information Fusion for Civil Disasters"
Dr. James Llinas
Director of the Center for Multisource Information Fusion
SUNY Buffalo

"Use of a Transfer Function Model to Predict Field Reliability"
Dr. William Q. Meeker
Iowa State University

The name of the series has been changed to *The Kate Gleason College of Engineering Distinguished Speaker Series*. We look forward to expanding the series' audience by inviting alumni and industrial contacts from the Rochester area to attend.

We need your help in taking our speaker series to the next level. Please let us know what topics interest you and help us identify potential speakers. Please direct your suggestions to Mary Jane Frind at (585) 475-2146 or mjseen@rit.edu.

ctober 21-24, 2004

e College of Applied Science and Technology will offer several
ew York State requirement for licensed professional engineers.
available on the BCF website soon. Stay tuned!

Save the Date

KGCOE Alums – Dynamic Duo!

"I have always wanted to live in Europe," Melissa confessed. "I am just lucky that Jeff felt the same way." Melissa Rancourt and Jeff Krbec, two RIT Engineering alumni, took a different path than the typical engineering student.

The beginning of their story is a familiar one. Melissa and Jeff met while studying in the engineering program at RIT. They are also alumni of the Engineering House where they both lived for the first few years at RIT. Engineering brought them together, but their chosen fields within engineering are far apart. Jeff, EE '93, has always been interested in technology and, while working backstage on stage crew in the theatre, he decided to become an Electrical Engineer. Melissa, IE '93, chose to become an Industrial Engineer after reading the book Cheaper by the Dozen when she was 14 years old.

Their first jobs out of school took them to the Boston, Massachusetts, area. Jeff took the manufacturing path, gathering experience as a Project Engineer at Bausch & Lomb, Cadbury Beverages, and OSRAM Sylvania, where he was responsible for control system design and installation of numerous production systems. From this experience, he learned both Siemens and Allen Bradley drives in the plastics, glass, food and beverage, and medical supply industries. Later, he became the engineering manager at an automation systems integration company, where he was responsible for the management of all engineering activities and design of large-scale control systems.

Melissa always felt a connection to the service industry and applied industrial engineering principles to the healthcare field. Over an eight-year period working at Newton-Wellesley Hospital, she worked her way up from Management Engineer, to Senior Management Engineer, to Director of Operations Management – the whole time focusing on the productivity and efficiency of hospital operations while incorporating better quality, customer care, and performance results. During the last two years at NWH, she obtained her MBA during the evening at Babson College, focusing on entrepreneurship and marketing. Through all of this, she continued her work with Society of Women Engineers as she had done at RIT and joined the Massachusetts SWE Board of Directors as well as the Boards of the Rhode Island Institute of Industrial Engineers and the National Society of Professional Engineers.

Then suddenly the idea of moving to Europe began to emerge.

Why Europe? Jeff and Melissa always feel at a loss of words when it comes to this question. Melissa explains that she was born in Naples, Italy, so maybe this is why she felt this connection. Also, after marrying in 1994, Jeff and Melissa began travelling together: Rome, Florence, London, Oxford, Milan, Athens, Venice, and Istanbul. These travels convinced the couple that the move to Europe was the right choice for them.

So in 2001, Melissa and Jeff made the big decision to leave their jobs, sell their cars and home, pack up all their belongings, and move to Brussels, Belgium. Brussels, the capital of Europe, the home of the European Commission, and the location of the headquarters of many global corporations, offered the best opportunities. They saw it as the perfect base to start their new adventure.

Melissa is the Director of Operations at the European Foundation of Quality Management (EFQM). Among other things, EFQM is best known as the creator of the European Quality Awards, which is the equivalent of the

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Dynamic Duo! continued

Malcolm Baldridge award, a distinction for the best European organizations across more than 35 different countries, cultures, and languages. She uses both Industrial Engineering and MBA principles every day, either improving her company or the organizations throughout Europe. Her business travels take her across the channel and the continent; just in the last six months alone, she has worked in the United Kingdom, Belgium, Finland, France, Slovenia, Czech Republic, and Germany.

Jeff travels even more for his job. As the Global OEM Technical Consultant for Rockwell Automation, he is learning the cultural differences of working in Sweden, Belgium, Italy, and Germany – sometimes all in the same week. Once known as the company that built the space shuttle and B-1 bomber, Rockwell now supplies industrial automation solutions. Jeff's responsibilities include managing the automation conversion project for all Tetra Pak machines. Tetra Pak, one of the most profitable companies in Sweden, is best known for the tetra brick (e.g., juice box).

While Melissa and Jeff feel extremely lucky to have found the perfect positions for both their experience and their backgrounds, they enjoy the living in Europe part even more. After three years, they still come across the daily challenges of adjusting to a new life-style, figuring out the basics of daily living - shopping, banking, driving, eating, and striving for fluency in French. They are accustomed to challenges. Who could graduate from the Kate Gleason College of Engineering and not agree with that?! Now Melissa and Jeff face new and different challenges – and that suits them just fine.

Dean's Corner Continued

environment to support this new design initiative, as well as to provide space that is absolutely critical for our rapidly growing Computer Engineering program, our fledgling Microsystems Engineering Ph.D. program, and our numerous successful student-run competition teams such as the SAE Formula Car, the Aero Club's micro-air vehicle (MAV) and heavy-lift competition, and the Robotics Club's DARPA Grand Challenge and RoboCop competition. The College's leadership team has been meeting regularly with the architects to finalize the design of the new addition, with the goal of breaking ground next spring contingent upon our success in raising the balance of the funds. The plan is to create an engineering design center that is modeled after the structure of a start-up company, with elements to support the product development process from conception to the creation of a fully-functional prototype. Also included will be a machining and manufacturing center, created by moving and expanding the existing Brinkman Machine Tools Lab from the Slaughter building (CIMS) to a location adjacent to the current manual machine shop in the James E. Gleason Building.

Another highlight was the relocation of the Industrial & Systems Engineering Department back to the ground floor of the James E. Gleason Building, a move critical to the success of the multidisciplinary design initiative. In addition, both the Electrical Engineering and the Mechanical Engineering departments have introduced biomedical engineering options into their curricula to address the needs of this rapidly growing segment of the economy. Most recently, we received a $1 million gift from Analog Devices, Inc., to support the creation of the *Analog Devices Integrated Microsystems Laboratory* in the EE department. The research mission of the *ADIML* will be to explore, understand, and apply emerging technologies in integrated electronics, MEMs, and biotechnology, concurrent with investigating novel analog and digital integrated circuit design methods and system-on-chip architectures to leverage these emerging technologies.

These are just a few of the highlights. You need to visit to learn more. Brick City Weekend is just around the corner: Oct. 21-24.

As I look over my nearly four years as Dean here, I continue to gain inspriration from the dynamic, entrepreneurial atmosphere of the College and the faculty's unwavering commmittment to students and the high qualtiy of the KGCOE educational experience.

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RIT has a newly designed web site and the KGCOE's is new too. Please check it out at www.rit.edu/eng.

We would love to hear what you think of the new layout. Of course, we are always happy to hear what you are doing in your life and in your careere. Drop us a line at the address above or and email at kmeeee@rit.edu

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