

Enginuity

Newsletter for Kate Gleason College
of Engineering Alumni

Summer-Fall 2009

KGCOE
R·I·T



After an abnormally cool and somewhat soggy summer, the weather in Rochester has become extraordinarily beautiful – just in time to welcome a new group of energetic students to the RIT campus. Indeed, for Freshman Orientation Week, we have been treated to the longest stretch of sunny weather of the summer, with highs in the low 80s. Each fall I think that the state of the KGCOE cannot possibly get any better. Yet here we are again, launching another academic year, with new milestones and accomplishments to celebrate. Last year I marveled at the extent to which the college has grown in size and stature over the past decade, and the extent to which it has simultaneously achieved high marks for its support of student success. I am proud to say that the KGCOE has again set a new high-water mark of 93.5% for the retention of its freshmen. This is the seventh straight year that the KGCOE has exceeded the Institute average rate for freshmen retention. President Destler has been pointing out recently that RIT is now third among all private universities in the U.S. in the number of BS degrees granted in the STEM (science, technology, engineering, and mathematics) fields, and the KGCOE is playing a central role in support of that statistic. It is no wonder that so many companies have put RIT on their short list of schools from which to recruit to meet their workforce needs.

This fall we welcome a freshman class to the KGCOE that is unique in several respects. There are 108 women in the class, which exceeds last year's record breaking total of 102, making it the second year in a row that

Meet 2009 Distinguished Alum Gary Gay, Electrical Engineering, 1973

All KGCOE Distinguished Alums are invited to address our graduating class at Commencement. Gary Gay graciously agreed to do so and had some meaningful remarks in these challenging times. Gary reflected on the first few years after he graduated and found similar economic conditions this year.



When Gary graduated from RIT in 1973 with his BS degree, well prepared and energized from his studies and his co-op experiences, the world was in turmoil. During 1973-1974 the stock market crashed due to the collapse of the Bretton Woods System (often referred to as the Gold Standard) and the resulting devaluation of the US dollar. The Dow Jones Industrial Average retreated 45%, the London Stock Exchange fell a catastrophic 73%, and the Yom Kippur War broke out. As a political backlash, OPEC, led by Iran, imposed an oil embargo on the US, Europe and Japan. What followed were rising gasoline prices, gasoline rationing, a mandatory 55 mph max speed limit, and year-round Daylight Savings Time.

Thus, Gary spent his first few years after graduation not even working as an engineer. Still, early in his career, Gary gained an acute understanding of the semiconductor industry and microchip development and learned valuable management and sales skills including the importance of developing a highly functional team.

Imagine RIT 2009

This year's *Imagine RIT* was a solid hit once again. We surpassed last year's attendance by many more thousands, and worked out some of the kinks. Visitors were able to plan their day ahead of time and even print out an itinerary customized for them. Kid-friendly exhibits were identified as such, making it easy for families to plan their day as well.

President Destler issued a "Green Vehicle Challenge" to the entire RIT campus to construct a vehicle that would expend the least amount of energy in a three-mile loop around campus. Ten teams rose to the challenge and one of the winning teams, Team CIMS, included ISE student, Abbey Donner, pictured below.

Eight awards were given out to the more than 400 exhibits. KGCOE teams garnered four of these awards:

Awarded by ITT Space Systems Division to the **Micro Aerial Vehicle (MAV)**; Senior Design Team #9122: Erik Bellandi, Ben Wager, Garrett Argenoa, Tahar Allag, Michael Pepen, Ramon Cempiesano, Stephen Nicols

Awarded by Perkins Restaurant to the **Solar Car (MicroE)**: Elaine Lewis (staff), Blake Howell, Jeff Young, Elizabeth Bowser, Brian Romanczyk, David Barry, Steven McDermott

Awarded by Performance Technologies to the **Drowsy Driver Warning System**: Mark Cataldi, Jesse Harvey, Dieter Laskowski

Awarded by RIT AABOD (Alumni Board) to the **Automotive Fuel Cell Research Lab**: Satish Kandlikar (faculty), Nicholas Schneider, Jacqueline Sergi, Michael Daino

Many thanks to Impact Technologies who sponsored KGCOE again this year. Start making plans now to attend *Imagine RIT III*, May 1, 2010!



Photo courtesy of Jennifer Moon



Photo courtesy of Jennifer Moon



Photo courtesy of Max Schille



Photo courtesy of A. Sue Weisler



Dean Harvey Palmer presents Impact Technoliges with framed posters for *Imagine RIT 2008* and *2009*.

From left to right: Mike Roemer, Avinash Sarlashkar, Harvey Palmer, Greg Kacprzynski '97, '02, and Jeffrey Steele '78.

Continued from page 1

Gary's entrepreneurial spirit and his broad experiences made him a perfect match to join forces with a small team of entrepreneurs to create a small start-up company in Austin, Texas, called Silicon Laboratories. As VP of Global Sales, Gary

built a premier sales

team, and established Silicon Labs as an internationally recognized leader in the design and development of high performance, analog-intensive, mixed signal integrated circuits for a wide variety of consumer applications. Today, Silicon Labs has annual sales of \$500 million and a market cap of over \$1.2 billion dollars.

In 2007 Gary announced his retirement. He felt it was time to enjoy his muscle cars and motorcycles after his hard work and many successes. But it wasn't really in his make-up to retire, and he started to look for something new, exciting, interesting, and challenging. He found it soon and teamed up with another group of entrepreneurs.

In 2008, Gary became vice president of Worldwide Sales for Nuventix, Inc. This Austin-based high-tech start-up company has developed some intriguing cooling technologies for LED lighting systems and electronics. Gary is again extremely busy, traveling around the globe and racking up those frequent-flyer miles, to promote innovative technology and grow the company and its bottom line.

Interestingly, although energy efficiency is Gary's top priority in his current business pursuits, this is certainly not the case when it comes to one of his favorite hobbies. Gary collects vintage automobiles, notable for their large displacement, high horsepower engines.

Gary recognizes that his RIT education contributed to his success by reinforcing his ability to approach things in a logical and analytical fashion. He notes that the scientific method, although boring on the surface, is a life-long tool that can help one achieve great results in an efficient and effective manner, and the co-op program adds the necessary real world touch to round out

With a car collection that averages eight miles to the gallon, Gary thought that he had better do something "green", and quips that he now has something cool to talk about at cocktail parties.

the rough edges and help determine desired career paths. There is no doubt in his mind that his successful career and, to a great extent, his enjoyment of life have been shaped by his engineering education at RIT.

Congratulations ISE!

The Industrial & Systems Engineering Department received the 2009 Innovations in Curriculum Award from the Institute of Industrial Engineers at the organization's annual conference in June. The program won the award for the Integration of Sustainable Engineering into the Industrial Engineering Curriculum. Faculty members Andres Carrano and Brian Thorn (pictured below with IIE President, Jane Ammons) shared the honors. Their entry described how sustainability initiatives were incorporated into the degree program and the growth of the program over a six-year period resulting in new courses, undergraduate minors, new senior design projects and two new graduate degree programs as well as an increase in student participation.



The work, partially funded by the United States Environmental Protection Agency, results from several cross-disciplinary teams and with contributions from Harvey Palmer, dean of the Kate Gleason College of Engineering; members of the KGCOE faculty including Edward Hensel (ME Dept. Head), Marcos Esterman, Robert Stevens and Margaret Bailey; James Winebrake, chair of the Public Policy Department in the College of Liberal Arts; and Maureen Valentine, associate dean and faculty member in the Civil and Environmental Engineering Technology Department in the RIT College of Applied Science and Technology.

Brick City Homecoming & Family Weekend

This year Brick City Homecoming and Family Weekend is all about HOCKEY and much more! Go to: www.rit.edu/brickcity/ for full details. Here are some highlights for the weekend.

Induction of Dr. N. Richard Reeve into the ISE Academy 1:30 PM Friday, October 9
ISE alums, faculty, retirees, and staff will celebrate the 40th anniversary of the Industrial & Systems Engineering Department. RSVP by September 25 at rit.edu/brickcity/.

KGCOE College Gathering 4 PM Friday, October 9
Enjoy some refreshments while hearing what's new at KGCOE from Dean Harvey Palmer. Register to win and RIT Spirit Package! All are welcome.

Comedian Jim Gaffigan 9 PM Friday, October 9
Of Comedy Central's *Beyond the Pale* and *King Baby*. Go to: www.rit.edu/brickcity/ for ticket information.

RIT President's Alumni Ball 6:00 PM - 12:00 AM Friday, October 9
Celebrates RIT history, RIT spirit, and our RIT alumni! Chat with President Bill Destler, share in a bountiful feast and dance the night away. All RIT alumni, alumni-in-training, parents, faculty and staff are invited to this black tie optional affair. Go to: www.rit.edu/brickcity/ for ticket information.

Industrial & Systems Engineering Golf Tournament 1 PM Saturday, October 10
Riverton Golf Club, West Henrietta, NY. Contact Jacqueline Mozrall at jrmeie@rit.edu.

RIT Hockey Season Opener! 7:05 PM Saturday, October 10
Cheer on the Tigers as they take on Colgate at downtown Rochester's Blue Cross Arena. Go to: www.rit.edu/brickcity/ for ticket information.

Student Government Horton Distinguished Speaker 11 AM Saturday, October 10
Jimmy Wales, Founder of Wikipedia. Go to: www.rit.edu/brickcity/ for ticket information.

Class Reunion Reception 3:00 PM - 5:00 PM Saturday, October 10
Celebrate your RIT class reunion by reconnecting with your classmates and sampling wines and cheeses from around the world. Class reunion years: 1959, 1969, 1979, 1984, 1989, 1999, and 2007. Hors d'oeuvres will be served. (cash bar) Go to: www.rit.edu/brickcity/ for ticket information.

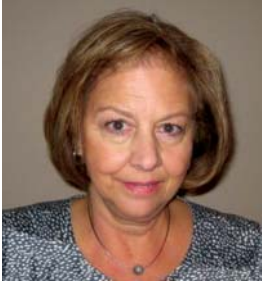


The RIT Formula SAE Team after their triumphant win in California this spring!

The team is led by Dr. Alan Nye, standing far right with cap; and team captain Anthony Salvo, kneeling far left. Students from all colleges at RIT participate in this very successful venture.

Finding Jobs in a Tough Economy: No Silver Bullet

by Louise T. Carrese



As our country struggles through one of the deepest economic downturns in a generation or more, KGCOE students are understandably concerned about their job prospects. This is especially true for co-op positions since completing a number of co-ops is a requirement for degree certification. Charting the

economic trends and indicators as closely as we do, we understand how challenging the current employment market appears. Although there is no “silver bullet” which will magically generate appropriate job opportunities, we encourage current students, new grads and alumni to use the following strategies to ensure they are doing everything possible to find suitable employment in this job market:

- You control the single most important attribute in finding a job...attitude. You choose how to see the world and no one is interested in hiring individuals that don't think positively about themselves, their abilities or the company with whom they are interviewing.
- Brand yourself: know what you have to sell and how you will add value to an organization. Make sure your marketing paperwork (resume, cover letter, etc.) is strong, targeted and error-free.
- Be flexible: you'll have to work harder and likely wait longer for the best opportunities; expand the industries and geographic areas you will consider.
- Network! Let everyone you know you're looking for a job and utilize the social networks at your fingertips (LinkedIn, Facebook, etc.) to make contacts.
- Take full advantage of the services, educational programs and resource materials available through the Office of Cooperative Education and Career Services.

Likewise our office is working diligently to lessen the impact of the current economy on students' job search including:

- Reaching out aggressively to all our employer partners to help keep RIT students and alumni on their radar when it comes to hiring.

- Marketing heavily to employers who haven't recruited at RIT in the past to form new hiring relationships.
- Offering a regular schedule of workshops including “A Stimulus Plan for Your Job Search – Tips on How to Find a Job in a Tough Economy”.
- Working with the KGCOE Development staff so that they can encourage current and prospective donors to recruit students for positions with their companies or expand our network of potential employer recruiting partners.
- Leveraging our technology including video conferencing capabilities to offer employers more cost effective recruiting opportunities.
- Emphasizing our one-to-one advising to help students develop and implement a job search strategy customized to their needs and interests.
- Working closely with our colleagues in Alumni Relations to leverage the network of successful RIT alumni, to increase the number of job postings and opportunities for students and other alumni who are seeking employment.

Finally, but very important for all alumni reading this newsletter: if you are seeking a new position, whether by choice or circumstance, you continue to have access to all the services and programming offered by our office. This includes everything from re-tooling your credentials (resume, correspondence, interview techniques, etc.), attending the institute-wide Career Fairs each fall and spring, participating in any of the workshops and seminars we offer throughout the year to personalized one-on-one advising regarding your job search. For additional information on events and activities for alumni, please go the web site: <https://www.rit.edu/alumni/careers/>

Please contact me directly at ltcoce@rit.edu (phone: 585-475-5459) if your organization or someone you know has co-op or full-time positions available. Recruiting at RIT is a simple process and can be handled by phone or on-line in about five minutes. Invest a little time and assist an Engineering student in sourcing a position...it's a great low budget way to help a current student succeed!

Dean's Alumni Speaker Series Continues Success

The Kate Gleason College of Engineering Dean's Alumni Speaker Series is an ongoing initiative that provides students with real world examples of engineering principles in practice. All presentations are open to students, alumni, faculty, and staff. The 2009-2010 dates will be finalized soon, please visit www.rit.edu/alumni/kg-coe for the schedule of KGCOE alumni events.

Thank you to our 2008-2009 alumni speakers:

December 11—**Dr. Donald Hanson**, Director, Information Directorate - Air Force Research Laboratory, Rome, NY (Electrical Engineering '68)

"Whose Shoes are you Looking At?"

January 15—**Tony Mannion**, Regional Manager - Emerson Process Management (Electrical Engineering '87)

"Engineering Graduate – Now What?"

February 12—**Leonard A. Parker**, Retired Vice President and Chief Engineer - Xerox Corporation (AAS Photography '74, B.S. Imaging Science '76, M.S. Printing Technology '78)

"Innovation and Invention"

March 19—**William A. Schmitz**, Chief Operating Officer - Ultralife Batteries (Mechanical Engineering '85)

"Ultralife Corporation and Wearable Power"

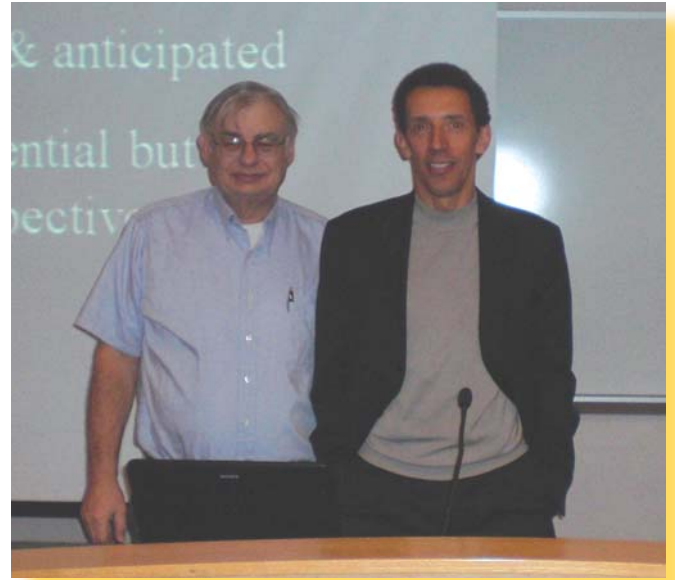
April 16—**Dale Davis**, Patent Counsel - General Electric (Mechanical Engineering '96)

"Another Approach to Your Career"

April 23—**Nicholas Ilyadis**, VP and CTO - Enterprise Networking Group at Broadcom Corporation (Electrical Engineering Technology '84)

"Energy Efficient Networking"

For more information regarding the Dean's Alumni Speaker Series or any alumni events at the Kate Gleason College of Engineering, please contact Jasmine DiSalvo, Assistant Director of Development and Alumni Relations, at 585.475.5045 or jasdar@rit.edu.



Dr. Dick Reeve, Associate Dean (on left) with Len Parker '74, '76, '78, speaker on Feb. 12, 2009.

Dean's Corner continued

the number of women has hit triple digits. Prior to last year, the largest cohort of entering women was 67 in Fall 2007. The extraordinary success that the Kate Gleason College has experienced in attracting women is most certainly due in large measure to WE@RIT, which is responsible for a comprehensive set of programs that not only support the recruitment and retention of women in the college but also reach out to the community to encourage younger women, grades 4-12, to pursue engineering as a career. The outreach to middle school girls intensified about six years ago, and so it is understandable that the full impact would materialize now.

I am also extremely pleased to report that this year's freshman class has the largest number of under-represented minority students in the history of the KGCOE. The 61 AALANA (African-American, Latino-American, and Native-American) freshmen reflect a jump of nearly 61% over the college's previous high of 38, which had been sustained for the last two years. The great strides made in diversifying the student population in the college are due to the strong partnership that exists between the KGCOE and the Division of Enrollment Management, as well as the strong sense of community that

has been cultivated within the college by the dedicated faculty and staff who are unified by their unwavering commitment to students.

This fall's freshman class is also the first to include a cohort of chemical engineering majors. Although it wasn't until October 2008 that RIT received NYS approval to offer the degree, the college was still able to recruit an entering class of 39 ChemE majors, and there is no doubt that several of the freshmen in the Engineering Exploration program will choose ChemE as their major by the end of their first year.

We are now anxiously anticipating word from the NYS Education Department about a complementary proposal to offer the BS degree in biomedical engineering. This program is unique in that it focuses on the systems engineering of the human body and other living organisms. Unlike many of the 90 other BS programs in biomedical engineering across the country, every effort has been taken to make the KGCOE program distinct from the foundational engineering disciplines (i.e., chemical, electrical, mechanical, etc.). Our operating premise is that biomedical engineering is both a fundamental discipline and an application domain. Needless to say, the importance of the traditional engineering disciplines to the solution of healthcare related problems has grown significantly in recent years. In response to this growing trend, over the last four years the KGCOE has developed formal bioengineering options within its undergraduate programs in electrical and mechanical engineering to complement a well-established concentration in ergonomics and human factors in industrial and systems engineering. By contrast, the new BS degree program in BME was crafted as a stand-alone program that is distinguishable from these traditional disciplines. Guided by input from a wide spectrum of biomedical companies, the curriculum has been structured to develop graduates who understand the challenges and constraints of interfacing devices to the human body to address healthcare issues. Indeed, the graduates will fill an unmet need on multidisciplinary teams that are tasked with developing innovative products for the biomedical marketplace.

Additionally, the KGCOE faculty has had another outstanding year from the viewpoint of research as well as teaching. For the fiscal year that ended in June, the faculty attracted a record \$5.6 million in external research support from government agencies, corporations

and foundations. The two-year average for 2008 and 09 is \$5.4 million compared to \$304,000 in external funds for research only a decade ago. This is a remarkable achievement for a college that is focused so strongly on undergraduate degree programs. We all were somewhat surprised and pleased to see the Kate Gleason College ranked among the top 100 research-focused graduate colleges of engineering by *US News and World Report* this past spring. In this ranking, the KGCOE is conspicuous in that it is the only engineering college in the top 100 that has no discipline-based Ph.D. degree programs. Doing research is the primary way that engineering faculty engage in lifelong learning, which assures that the information presented in the classroom is both current and relevant. Furthermore, the broad spectrum of externally funded research activities that now exist in the college provide a myriad of hands-on learning opportunities for our undergraduates and MS students, who gain first-hand experience in advancing the body of knowledge in their discipline. It is truly gratifying to see corporations reaching out to the KGCOE and its faculty not only to find first-rate graduates to strengthen their workforce, but also to identify innovative solutions to their technological challenges.

As you might imagine, we all continue to be apprehensive about the serious negative impact that the current economic climate could have on RIT and its students. We are all cautiously optimistic about student enrollment this fall, which appears to be strong and in line with enrollment targets. Of course, the sharp downturn in the economy has presented significant challenges to our students regarding both co-op and permanent job placements. The good news is that RIT students have a competitive edge over their contemporaries because of their can-do attitude, their prior co-op experience, and RIT's strong brand name in the marketplace. While attendance at the semi-annual job fair this spring was lower than in previous years, the showing was still strong, providing a clear indication that companies highly value the long-term relationship that they have forged with RIT over the years. For those who are experiencing adverse consequences of the harsh economic conditions, please check out the article by Louise Carrese, Sr. Associate Director of Cooperative Education and Career Services, on page five of this newsletter. Hopefully, the economic recovery is close at hand, and the year ahead will bring new opportunities for us all.

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