

INDUSTRIAL & SYSTEMS ENGINEERING

ISE NEWS

FALL 2009

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ENGINEERING
AND
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UF | UNIVERSITY of
FLORIDA

CHAIRMAN'S COLUMN



I write this letter with a sense of growing excitement in the department and on campus. No, it's not because Tim Tebow is back at it again on the gridiron (well, not entirely). Rather, the excitement is from a new year and a sense that the dark days of budget cuts might be behind us soon.

In the department, we welcome two new faculty members: Dr. Yongpei Guan and Dr. Guanghui (George) Lan. Dr. Guan, an expert in discrete and stochastic optimization with application interests in supply chain management and energy policy, recently won the National Science Foundation CAREER Award as a faculty member at the University of Oklahoma. (Yes, we beat the Sooners on the football field and the classroom last year!) Dr. Lan is an expert in convex and stochastic optimization with application interests in statistical learning and engineering systems. Dr. Guan is teaching Supply Chain Optimization this semester while Dr. Lan is teaching Simulation. The two have a lot in common – both are from China; both graduated from Georgia Tech; both are married to engineers; both have three-year old boys; and now, both are an integral part of our department. We are extremely excited to have them here and look forward to working with them for years!

In addition to Dr. Guan and Dr. Lan, we plan on hiring another faculty member again this year. As many of our competitors will not be hiring due to difficult budgetary times across the nation, we are excited about the talent that will be available.

The excitement from campus comes from the top. Provost Joseph Glover named Dr. Cammy Abernathy as Dean of the College. The former Associate Dean for Academic Affairs and Professor of Materials Science and Engineering is excited about the future and plans to hire a number of new faculty members in the next two years. Obviously, we hope to be a part of those plans. But the traditional hiring patterns of the past may be changing, as the new Dean would like to emphasize research areas that leverage current opportunities – such as energy (given significant state funding in this area), nanotechnology (given the new nanoscale science and technology center), and medicine/healthcare (given the growth of Biomedical Engineering) – which may span multiple departments. As we play important roles in many of these multidisciplinary areas, I am excited about our future prospects.

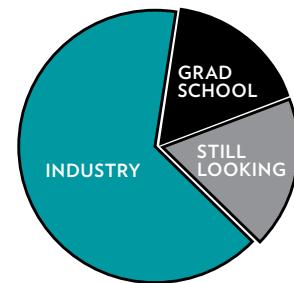
Recently, President Bernie Machen voiced his optimism for the future, after noting that a \$16 million budget gap still had to be closed. However, stimulus money is to be directed at new faculty hires over the next two years with differential tuition picking up the salaries after the two years of funding is spent. The goal is to hire dozens of new faculty across campus. As noted earlier, in addition to our new hires this year, which is a significant cause for optimism, we plan on hiring again this year, only furthering our sense of optimism.

Our current students and recent graduates also give us a great sense of optimism. We graduated 13 students from our Ph.D. program this past spring and summer! This is an amazing number. More importantly, they are all employed, with the majority landing post-doctoral or faculty positions in academia. The Gator ISE reach will stretch from the United States to Canada to England to Spain to Turkey to Taiwan from this class alone!

We also graduated an incredible number of undergraduate and master's students. We have closely tracked the placement of our undergraduates and are happy to report that of the 59 that replied to my inquiries (or constant nagging by yours truly, if you want the

truth), 65% landed jobs in industry while 17% are pursuing graduate studies (in engineering, business and law school). For all of you numbers junkies out there, the remaining graduates were evenly split between those looking and those looking with back-up plans, such as graduate school. Given the difficulty of the economy, especially for a number of other disciplines, our graduates are faring well.

UNDERGRADUATE PLACEMENT 2009 SPRING CLASS



So how did we top all of this good news? With a party of course! Thank you to all that attended our department's 75th Anniversary celebration this past November. We had an open house, panel discussions and a fabulous reception and banquet in which we honored a number of alumni. Most stayed around to see the Gators take it to the Commodores on Saturday. We'll give a full report of the weekend in our next newsletter. Many details have already been posted on our website (www.ise.ufl.edu).

As always, I look forward to hearing from you. Since it's our 75th Anniversary, we are making a concerted effort to find all of our alumni – there are over 5,000 of you now! Your help in this endeavor is greatly appreciated. Go Gators!

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph C. Hartman".

JOSEPH C. HARTMAN
Professor & Chair
352-392-1464
hartman@ise.ufl.edu

FACULTY NEWS

CAREER AWARD WINNER GUAN JOINS ISE FACULTY



While most of the Gator Nation was focused on how to stop Sam Bradford of the Oklahoma Sooners last January, the ISE Department was focused on entertaining another Sooner: Dr. Yongpei Guan. Guan had been on Oklahoma's faculty of Industrial Engineering for four years before accepting an offer to join the Gator Nation this summer. The most recent National Science Foundation CAREER Award winner in the field of Operations Research, Guan is an expert in discrete optimization and stochastic programming, with interests in solving problems in supply chain management, transportation systems and energy policy analysis. In addition to NSF, his work has been funded by the Department of Defense and Department Transportation and published in prestigious journals such as *Operations Research* and *Mathematical Programming*.

"We are extremely excited to have Dr. Guan join our faculty," said Department Chair Joseph Hartman. "His research is top-notch and meshes well with our strengths in optimization and supply chain management." He is currently teaching the department's course in supply chain management at the master's level.

Guan's current research focuses on developing computational methods and theoretical analyses for multi-stage discrete optimization problems under uncertainty. The application areas include problems in container terminal operations, supply chain coordination and energy policy analysis. "These are great application areas that are important for the nation," said Guan, "especially port security and energy efficiency issues," said Guan.

Guan holds dual Bachelor degrees in Mechanical Engineering and Economic Decision Science from Shanghai Jiao Tong University and a Master of Philosophy degree in Industrial Engineering and Logistics Management from Hong Kong University of Science and Technology. He earned his Ph.D. in Industrial and Systems Engineering from the Georgia Institute of Technology in 2005.

His family moved from Oklahoma this summer in order to get acclimated before the Fall semester began. His wife Lei Tian, holder of a M.S. in Industrial Engineering from Georgia Tech, works for Power Costs Inc. (They met while both studying at Georgia Tech.) They have a three-year-old son, William.

"ISE at UF has been a well-known department for operations research and supply chain management for a long time," said Guan about his move. "I feel that this place is the best match and I can improve myself by learning from and working with outstanding colleagues." □

LAN SLOWLY SETTLING INTO NEW ROLE IN GAINESVILLE

Most graduates like to take a break before they start their careers – backpack across Europe, drive across the USA, etc. The latest faculty hire in the ISE Department was not so lucky. By the time Dr. Guanghui (George) Lan had defended his dissertation and turned in all of his paperwork at Georgia Tech this August, he barely had time to find a place to live in Gainesville in order to start the semester. In fact, his wife, Dr. Zhaohui (Julene) Tong, and three-year old son just moved down from Atlanta in time for her to deliver their second child in late October.

Unfortunately, this is not the first time that they have spent time apart. They met in China in high school and were married in 2001. After completing their education in China, they both worked in Shanghai – Lan for Trident Multimedia Technology as a senior software engineer and Tong with Sonoco Packaging as an operations manager. Lan came to America in August of 2002 to pursue a M.S. in Industrial Engineering at the University of Louisville. Tong started her doctoral studies in Chemical Engineering at Georgia Tech in 2003 with Lan joining her in 2004. Tong has been working as a consultant for CH2M Hill since graduating with her Ph.D. in 2007.

Despite the looming issue of relocating Tong's job, they are very excited to be in Gainesville. "There is a group of active operations researchers with similar research interests," said Lan about joining the department, and "everybody is nice and approachable." He also noted the climate is similar to his childhood home, yet another plus.

Lan comes to Florida with high honors. He won the INFORMS Computing Society Student Paper Competition and took second place in the INFORMS George Nicholson Prize. His research interests lie in convex programming, stochastic optimization and statistical learning with applications in finance, logistics, production and engineering systems.

"I am working on the theory and algorithms for stochastic and large-scale convex optimization," explained Lan about his current research. "Recently, I am applying these techniques to statistical learning problems in order to highlight useful information from a huge body of rough data."

Lan illustrated this by describing the "Netflix Problem." In the problem, users provide ratings of movies -- but they typically only rate a few movies. Netflix would like to complete users' ratings in order to recommend movies to other potential users. Under certain assumptions, it has been recently shown that this problem can be cast as a convex optimization problem. Note, however, that to solve the resulting optimization problem is extremely difficult, given the size of the training data set (the Netflix prize problem consists of more than 100 million ratings from over 480,000 randomly-chosen, anonymous customers on nearly 18,000 movie titles.) When you consider the amount of data being collected by companies and the government these days, this research has the ability to solve problems in a number of application areas.

"Despite being a recent graduate, Dr. Lan is already an accomplished researcher," said Joseph Hartman, Chair of the ISE Department. "We are extremely excited to have him in Gainesville and look forward to his family settling here for a long time!" □



MOVING FORWARD WITH CONFIDENCE

Despite the gloom of a lagging economy looming over graduates, the Department's annual spring banquet was an evening of fun and excitement with more than 200 attendees.

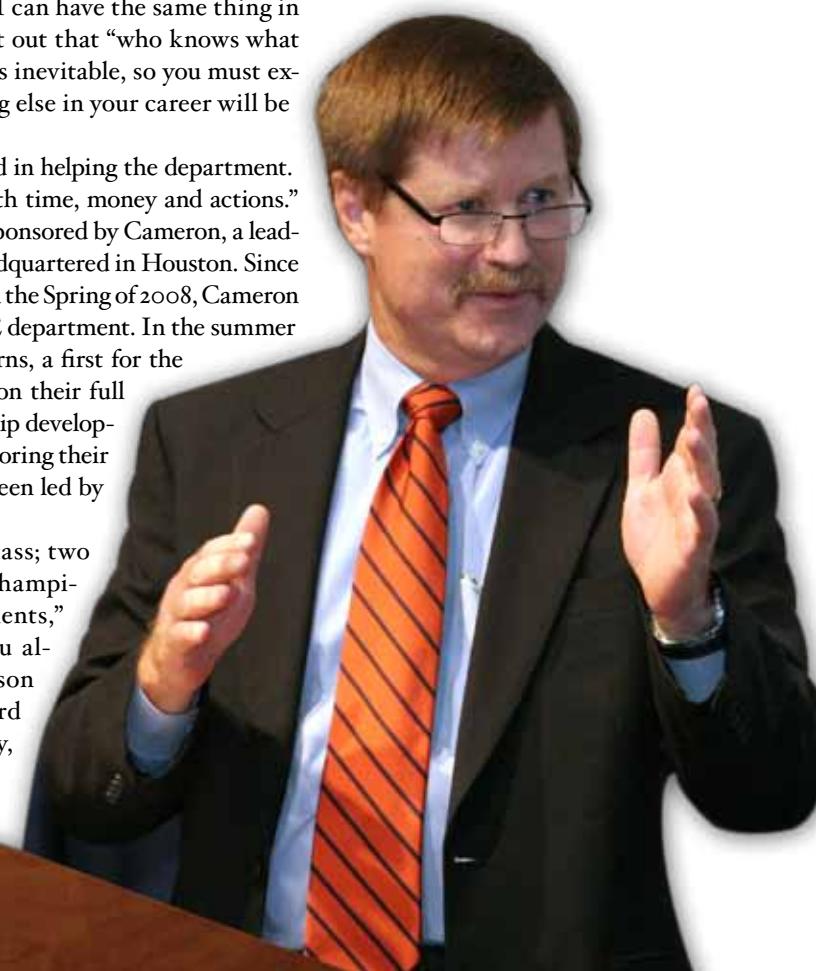
This year, those graduating were encouraged to invite their parents to the event, held the evening before graduation. In addition to entertainment by the students (a video covering the year and their annual awards) and an improvisational comedy group, HUNTER JONES, a 1980 graduate and Vice President of Operations in the Surface Systems Division of Cameron International, delivered a keynote address. (Since then, Jones was promoted to CIO.)

Having survived the terrible job market in the 1980s, Jones told the soon to be graduates to "move forward with confidence." He also stressed that they need to network with their peers and mentors, but be ready for change.

"When I was in school we still had to fight for time in the key punch room in Weil Hall and a few hours later when we got the results, hope that our program compiled and ran as we wanted. Now I can have the same thing in my laptop," laughed Jones. He went on to point out that "who knows what will happen in your career except that change is inevitable, so you must expect it, create it, embrace it and lead it. Nothing else in your career will be as exciting."

Jones reminded the graduates to follow his lead in helping the department. "Be true to your school," he said, "Support it with time, money and actions." Jones has certainly done that. The banquet was sponsored by Cameron, a leading supplier to the oil and gas industry that is headquartered in Houston. Since Jones' first visit to an "Introduction to ISE" class in the Spring of 2008, Cameron has been steadily increasing its support of the ISE department. In the summer of 2008, they hired a number of Gator ISE interns, a first for the company. This year, they landed five graduates on their full time payroll, including a number in their leadership development rotational program. This fall, they are sponsoring their first senior project. Many of these efforts have been led by Jones, a member of the ISE Advisory Board.

"As a Gator I am of course jealous of this class; two BCS championships, two NCAA Basketball championships and many other athletic accomplishments," Jones said with a grin in closing. "But, if you always remember those things are not the reason the University exists, you too will work hard throughout your life to improve the University, especially the ISE Department." □



MEET THE LATEST ISE GRADS

SPRING 2009

BACHELOR OF SCIENCE

Daniel Arvesu, Neil Balse, Vanessa Begat, Matthew Brummitt, William Campbell, Amanda Casiotti, Michael Cheung, Alex Choo, Cory Christeson, Nancy Chung, Gary-Gregoir Coquillo, Michael Crocco, Justine Cubbage, Jason Dampier, Julie Disparte, Michael Dobry, Kenneth Drake, Ross Durham, Jeffrey Escarra, Michael Fant, Aaron Friedlander, Dory Garcia, Cynthia Germain, Anthony Giudice, Lars Gustavson, Scott Hall, Amira Hemani, Jessica Hinkle, James Hogan, Joseph Janusz, Bradford Johnston, Frank Kramer, Jonathan Looke, Ryan Loundy, Kimberly Marshall, Alexander Mason, Laurie McKenna, Domonique Mitchell, Michael Mitchell, Joseph Nagy, Sepehr Nasseri, Angelica Pacheco, Antonio Perez, Kathryn Piotti, Gregory Puckett, Justin Roberson, Brendan Robinson, Martha Rodriguez, David Schwartz, Jo Marie Smith, Carlos Suriel, Carla Velazquez, Haven Waters, Christa Webb, Iris Zielske

MASTER OF SCIENCE

Jeffrey Adams, Keith Michael Arick, Clifford S. Bane, Brian Bartley, Thomas Biamonte, Lawrence Budnick, Deon Burchett, Jorge Camejo, Megan Cavida, Shu-Pin Chen, Bradley Clinger, Neha Arun Dhomne, Christopher Elverson, Neng Fan, Kahmahreah Farley, David Martin Geers, Manish Gidwani, Eric Arden Hunt, Deepa Juneja, Seongyeop Kim, Elizabeth King, Joshua David Kitain, Frank Kraemer, Steven Lapha, Taek Ho Lee, Hector Leiva, Xiachuan Li, Jose Lobo, Russell McLaughlin, Larry Miller, Michael Mitchell, Abhisek Mondal, Corrie Musgrave, Kamlesh Naidu, Varun Narayanan, Christopher Nelson, Julio Perales, Slade Patrick Peters, Janet Ritchie, Ana Maria Rivera, Kimberly Robinson, Camilo Sanchez, Timothy Sauro, Sarah Schilling, Luther Setzer, Mansavi Shah, Ming-Hsien Tsui, David Tumblin, Shriya Venkatachari, Amanda Webb, Matthew Wilbanks, Nils Witt, Kelli Wopperer, Jicong Zhang

MASTER OF ENGINEERING

Robert Algeo, Scott Bartlett, Scott Bertling, Andrea Breckenridge, Brian Corces, Graham Dodson, Christopher Hartmann, Susan Korty, Brian Lorenzetti, Stephanie McLeod, Stephen Mitchell, Amar Patel, Robert Peters, Karen Rangi, Daniel Rush, James Toepel, Michael Wilson

SUMMER 2009

BACHELOR OF SCIENCE

James Robert Jackson III, Nicole Dutreil, Megan Berry, Javier Escalera, Juliana Giraldo, Sharon Laderio, Christopher Matacale, Laura Mayol, Kevin D. McMurtrey Jr., Kevin Steinkirchner, Rafael Volcans

MASTER OF SCIENCE

Prama Anand, Maria Arias, Jeremy Berros, Shuang Chen, Phani Koundinya, Vivek Krishnaswamy, Anuj Lahoti, Arif Moshin, Harish Pillai, Siqian Shen, Chin Hon Tan, Ketan Thakaria, Alexander Veremyev, Pranjal Yeole

MASTER OF ENGINEERING

Francisco Chavez

DOCTOR OF PHILOSOPHY

The number of Ph.D. graduates was truly exceptional this year, with 11 defending their dissertations this summer alone. More than half are headed to academic institutions, either in the form of post-doctoral work or faculty positions, across the globe.

SEMRA AGRALI Bahcesehir University (Istanbul, Turkey) |

ASHWIN ARULSELVAN University of Warwick (England) | **ISMET ESRA**

BUYUKTAHTAKIN University of Arizona (Tucson) | **LI-MING CHEN**

National Chiao Tung University (Taiwan) | **ALEXANDRE GRASAS**

Pompeu Fabra (Barcelona, Spain) |

IBRAHIM KARAKAYALI McGill University (Montreal, Canada) | **OMER**

KUNDAKIOGLU University of Houston (Texas) | **MEHMET ONAL** Innovative Scheduling (Gainesville, FL) | **CHASE RAINWATER** University of Arkansas (Fayetteville) | **JOHN H.**

PENUEL JR. Department of Defense (Washington, D.C.) | **OLEG SHYLO**

University of Pittsburgh (PA) | **ZEKI**

CANER TASKIN Bogazici University (Istanbul, Turkey) | **JOON HUI YOON**



CONGRATULATIONS GRADUATES

The banquet honored the graduating class. Needless to say, the Department had an extremely productive year when measured by the number of degrees awarded. There were 66 B.S. ISE degrees conferred this past spring and summer, 86 master's degrees and 13 doctoral degrees. Despite the poor economy, the undergraduates had good success at landing jobs, with employers including traditional stalwarts Lockheed Martin, Raytheon, Harris, Siemens, Schlumberger, Disney, Quaker/Pepsi, General Electric, Intel, Trane and Entergy. Newcomers to recruiting ISEs included Cameron, Hospital Corporation of America, Nielsen, Philip Morris, Shell Oil, and Target. Nearly 10 graduates were going to pursue graduate studies in engineering, business and law.



STUDENT NEWS

LEARNING, TEACHING AND LEADING

"I STILL REMEMBER THE ANXIOUS FEELING I HAD FRESHMAN YEAR TRYING DECIDE ON A MAJOR," recalled Skye Burnup, ISE senior and current president of Alpha Pi Mu. "It felt as though my very next decision would dictate the rest of my life."

After reading through an endless number of program descriptions in the catalog, it was not until taking "Introduction to Engineering" that Burnup learned about ISE and switched majors. Now nearing graduation, she knows she found a major that matched her interests. "As I started taking more major-specific courses, I felt assured that I had made the right choice," she said. "As I got more involved in the department by attending IIE meetings and joining Alpha Pi Mu, I was able to form friendships with many of the people in my classes."

Burnup now assists new students with the same problem she once had

— she helps with the "Introduction to Engineering" class, where freshmen visit each department over the course of the semester. The department has three hours to convey the essence of the ISE major and hopefully convince a number of students to enroll.

"I think it is a great field of study because it provides such a variety of job opportunities," Burnup said. "What I have come to learn is that industrial engineers are needed everywhere; it's just up to us to prove it." She helped improve the presentation by incorporating an interactive game so participating students could get a hands-on feel of one side of ISE.

The department has provided many opportunities for academic and professional growth. Burnup landed a part-time internship as an IE consultant at Shands Hospital in management engineering, a group loaded with Gator ISE alumni.

"This experience revealed a direct application of some of the IE coursework in the curriculum, making it more engaging in the classroom," Burnup said. "I would love to do this as a career." She was also able to apply her skills in the logistics area with an internship at a distribution facility for Coach, maker of fine handbags.

As Burnup nears graduation, she is becoming more vocal for the department through APM leadership and a seat on the chair's advisory board. But she has also learned that education is as much up to the student as it is the department and faculty. "One of the most valuable things I have learned, is the ability to learn," she said. "Learning is a process that should never stop, and knowing how to learn is vital for success." □



PUTTING TECHNICAL SKILLS TO WORK

Alex Brown may be a few years from graduation, but he isn't waiting to make an impact on the department. He took over the reins of the IIE student chapter this fall — from Natalie Keller, the resident assistant who recruited Brown into the program — and continues to move the organization forward. Not that getting involved is new to Brown, also a member of Theta Tau and the Engineering Ambassadors. He previously served as IIE webmaster, treasurer and development chair.

Those previous positions are all paying off for IIE. The chapter now boasts a state of the art Web site (ufiie.org), which is more closely defined as a social networking site. It seems that he is always on the cutting edge of technology applications, whether it is managing large projects via new software on the web or just keeping calendars open to all.

"As IIE president I plan on using my technical side to bring the organization into the 21st century," said Brown. "I

redesigned the Web site last spring and plan on adding new features this semester, including an online store, a text messaging service for meeting reminders, and integrating it into the new UF ISE Social networking site that we are building to allow students and alumni to connect and keep in contact."

This technical side has been in Brown's blood for years. "In high school I started a small computer repair company where I grew to love the technical side of things," said Brown. "I was originally a business major, but knew after the first day of class it wasn't for me when my computer class professor started teaching us about the Internet and Microsoft Word." He clearly has found a home in ISE — especially the DSS classes that bring analyses and algorithms to life.

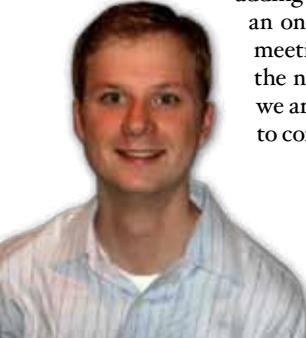
When not on campus, Brown can be found working in Orlando as part of a co-op for Disney. He served his third rotation this past summer, as he started working for them after his freshman year.

"Graduation is still two years away for me,

but I've grown to love the corporate environment while working at Disney," he said.

The self-proclaimed "amusement park junkie" would not mind a career at Disney — after all, it combines IE, technology and amusement parks. "Growing up as a fraternal triplet," explained Brown, "whenever the family went to an amusement park or zoo, I always grabbed the map and led us around in what I thought was the most 'efficient' route." Odds are his next project will be to give each Disney visitor a personalized GPS... □

I WAS ORIGINALLY A BUSINESS MAJOR, BUT KNEW AFTER THE FIRST DAY OF CLASS IT WASN'T FOR ME WHEN MY COMPUTER CLASS PROFESSOR STARTED TEACHING US ABOUT THE INTERNET AND MICROSOFT WORD.



A Family Affair



FOR THESE
ENGINEERS,
BEING A
GATOR IS
A FAMILY
TRADITION.

Father & Daughter

GEORGE ALEXANDER (B.S. IE '63, MBA '64) and his daughter, VALERI ALEXANDER BISHOP (B.S. ISE '91, M.S. ISE '93), share more than just a father-daughter bond. They share their college alma mater, both graduating from the University of Florida with degrees in Industrial Engineering.

George earned a B.S. in Industrial Engineering from UF in 1963 followed by an MBA in 1964. He held a variety of management and manufacturing roles throughout his career and recently retired from Johnson & Johnson. He is currently enjoying the time with his wife, three children and four grandchildren in south Florida.

Valeri earned a B.S. in Industrial and Systems Engineering, with high honors, from UF in 1991. She received a fellowship and became part of the first graduating class of the Engineering Management program, earning a Master of Science in Industrial and Systems Engineering in 1993. She was very active while at UF and earned numerous departmental, college and university awards and recognitions including "Outstanding Female Graduate," induction into the UF Hall of Fame and membership in Florida Blue Key. She has held various managerial roles in manufacturing and operations at Motorola in south Florida, most notably Boca Raton, over

the past 16 years. She is currently enjoying time with her husband and two young daughters. Valeri also serves on the Department's

Advisory Board.

Why did they pick Industrial Engineering at UF? George had originally enrolled in electrical engineering at UF, but after a few classes, realized it was not for him. He was drawn to IE because it combined business and manufacturing with the security of a technical vocation. He wanted to graduate with a degree in a discipline where there was diversity in potential careers and jobs were readily available.

Without realizing it, Valeri was driven to Industrial Engineering for the same reasons. "My parents were inspiring, they always stressed that I could do and be whatever I wanted," she shared. "They encouraged me to pursue my interests."

"My dad and I worked together on math homework and projects during high school. Engineering looked like an interesting area that offered stability and a good income, so I would ask him questions about it here and there," said Valeri.

"We used to take our children to UF to show them what a great university it was and share our memories and experiences, of course with hidden hopes that they too would one day attend," said George. "We stressed the importance of a college education and wanted them to find and pursue their interests."

"I remember going up to UF for homecoming games as a child, touring campus and wondering how anyone could take classes in a building as old as Weil Hall," said Valeri, laughing.

Valeri shared that she went to UF with plans to go into Biomedical Engineering. But while taking the "Intro to Engineering" course as a freshman, where every engineering discipline is discussed in detail, it was the Industrial Engineering section that caught her attention. The combination of technical, business and managerial aspects along

with the opportunity to work with people in such a wide variety of jobs was intriguing. It was all a bit familiar, as she knew this was what her dad did, but they had never really talked about the details of his degree and work. She immediately started asking him about his IE degree and job. The discussions continued throughout college and her career.

"It was great having the common interest and background, I really enjoyed the conversations with my dad. He helped me see the real-life applications of class material, such as facility layout, simulation and ergonomics," she recalled. "I would visit his workplace, hear about his projects and get energized about the class material. He also encouraged me through classes like physics that weren't my greatest interest — or his. Once I entered the workforce, we talked about similar projects at our jobs — I really enjoyed that," shared Valeri.

George recalls those times vividly too. "It was nice having those conversations. We were both interested and it was something we had in common over the years. We actually ended up helping each other," said George. "I was so proud of her."

"Our talks and her experiences often brought me back to my times at UF. We shared our college alma mater and so much more. Not everyone gets to talk with their daughter about topics such as TQM and JIT," he added with a smile.

Their ISE degrees brought more than they expected, as Valeri and George both met their spouses at UF. So there's more than just a father and daughter in this family of Gators — Valeri's parents (Helene and George), brothers (Jeff and Greg), husband (Craig) and uncle (Jon) are all proud UF grads. They say the family "breeds and bleeds" orange and blue. Who knows, maybe Valeri's daughters will continue with third generation UF ISE degrees.

HE HELPED ME SEE THE REAL-LIFE APPLICATIONS OF CLASS MATERIAL...HE ALSO ENCOURAGED ME THROUGH CLASSES LIKE PHYSICS THAT WEREN'T MY GREATEST INTEREST — OR HIS.



Parents & Child

BY KRISTIN DEAN (ISE Senior),
daughter of DEBORAH (B.S. IE '81) and
JEFFREY (B.S. IE '80)

The further I get into the Industrial and Systems Engineering curriculum, the more it seems that I was unknowingly raised just for it. I could not imagine studying in any other college or department. I love all that ISE offers and cannot wait to see exactly how it will be applied in my future endeavors.

First, let me explain how I got to UF's ISE department. Both my parents went to Florida, as well as all of their siblings and cousins. Though my family and I moved to Austin, Texas in 1995, we have always been Gator fans. Therefore going to UF was a no-brainer. Choosing my major was a different story. I knew both my parents were engineers, but was unaware of which major. Now before you jump to conclusions, you must understand that my mother has not worked directly with her major since before I was born and I had been told that my dad worked heavily with computers. (From this, I had inferred that he had studied computer engineering.) I never let the fact that they were engineers sway me in any career decisions and neither did they. Also, throughout my childhood I was very fickle in choosing my future, touching on meteorology and communications (mostly news anchoring). My parents were very encouraging with these ideas, taking me to a weather station as well as a news station.

GOING TO UF WAS
A NO-BRAINER.
CHOOSING MY MAJOR
WAS A DIFFERENT
STORY.

When I was nearing the end of my senior year in high school, an official decision had to be made. I knew my strengths were math and science and, knowing I wanted to succeed at UF, chose to stick to some sort of engineering. This entire time my family was helping me weigh all my options and keeping me from making a biased decision. I found a Web site that explained all of the different engineering majors at UF and narrowed it down to Civil and Industrial, with Industrial being the odds on favorite. This was when the irony of it all was brought to my attention. Both of my parents had majored in ISE at UF, my grandpa had majored in ISE at Ohio State, my older cousin had just started in IE at Illinois while my other grandfather had majored in civil engineering at Wyoming. I could not believe it! I made my (slightly biased, though fantastic) decision to go into Industrial Engineering and have not regretted it since!

My dad claims he chose ISE based on his father who had received his degree in ISE at Ohio State. He enjoyed watching his dad run his own development company and wanted to go into the same engineering. My mom informed me she chose ISE at UF after

meeting my dad. She was originally an architectural engineering major but switched to ISE thanks to my dad's persuasion. Both my parents started working for IBM after graduation. My mom worked at IBM for eight years in positions as an assistant to the site controller and a payroll manager, to name a few, before she left to take care of my sister and me. My dad has been working at IBM since and also got his MBA at Florida Atlantic University. He is currently a director at IBM.

As for me, I interned at IBM in Austin, Texas, this past summer as a User Experience Design Intern. I entered my fourth year at UF in the fall. I have applied to the new 3-2 Master's program that will enable me to graduate in May 2011 with both my B.S. and M.S. in ISE. Lastly, I am following even closer in my parents' footsteps by getting involved in IIE, Alpha Pi Mu and Tau Beta Pi.

It seems my family has been marked 'the family of engineers', especially when my younger sister chose to major in Industrial engineering at the University of Tennessee. (Go Gators!!)



Father & Son

BY ROBERT MENKE (B. IE '56)

When I was approximately 12 years old, I made a comment that I had no idea what I would want to study when I went to college. My stepfather responded that he had already figured out what I should study; "Industrial Engineering" he responded and proceeded to give me his logic.

He said he had noticed how I would frequently spend one hour trying to figure out how to do a thirty-minute job in twenty minutes. Stating while this was not practical, for just me, it would be for fifty people doing the same job everyday. This of course was in the late to mid 40's when industrial engineering by many, was still considered to be little more than time and motion studies.

After graduating from high school, I enrolled at the University of Florida where a faculty advisor informed me that since I appeared to have the aptitude in math and science for a degree in engineering and since he also informed me that engineers on an average were making more than any others with undergraduate degrees, I should consider pursuing an engineering degree.

Not having any idea which engineering degree would be most interesting and remembering the old comments from my stepfather, I sought additional information about industrial engineering. I became somewhat intrigued by what I considered the "breadth of possibilities" one might pursue with an industrial engineering degree.

Today, after following an entire career in insurance and finance, people are still somewhat surprised to find that my education background was engineering.

When my youngest son, Kyle, inquired as to what I thought would be a good academic field for him I explained why I thought industrial engineering would be a good pursuit also for him.

Kyle also has displayed an aptitude for math and science and I advanced why I felt that of all of the engineering disciplines, the flexibility and possibilities for industrial engineering were the greatest.

If anything, in a world which is rapidly becoming more and more technical, an understanding of the technical concepts will continue to become more important. One's ability to apply such technical understanding to a broad field of endeavors should prepare one for a wide range of career pursuits.

BY KYLE MENKE (ISE Junior)

My father was one of the major influences on my decision to become an Industrial and Systems Engineer. Through my childhood I grew up seeing the success of my father and at a very early age grew a desire to follow in his footsteps.

With my desire to succeed I asked my father "what can I do to best ensure my success in life?" He introduced me to the idea of studying Industrial Engineering. It combines my interest in business and my ability in both math and science. Because of this, it seemed to be a very logical choice. He told me about the surplus of lawyers and how there is always a need for engineers. Because of the lack of engineers in our society, they are in high demand and on average make more money than one with a typical undergraduate degree.

Around the time I started college, I saw a rise in the number of people without jobs and people searching for jobs. In an economy with jobs being few and far between, it is important to stand out and be highly desired. I was searching for a degree that would separate me from every other college graduate, and ensure me a high paying job in the marketplace. I thought back to the advice of my father, and I inquired further about industrial engineering. What I found is that it provides a degree with studies in all types of areas. And with the rapidly changing world I felt that a degree with a broad spectrum would give me the ability to adapt and change with our society and continue successfully in any realm I pursue.



I THOUGHT BACK TO THE ADVICE OF MY FATHER, AND I INQUIRED FURTHER ABOUT INDUSTRIAL ENGINEERING. WHAT I FOUND IS THAT IT PROVIDES A DEGREE WITH STUDIES IN ALL TYPES OF AREAS.

Husband & Wife

This summer, the ISE Department graduated an astounding 11 students from its Ph.D. program. Two of those graduates are headed back to Turkey to pursue academic careers. **SEMRA AGRALI** will begin her career at Bahcesehir University while **CANER TASKIN** returns to Bogazici University, his undergraduate alma mater. Both universities are in Istanbul, so both graduates will return home – together. While they had met briefly at a conference in Turkey before attending UF, they did not know each other until they stepped foot on campus in Gainesville in 2005. They were married in the summer of 2008.

“Being married to a colleague is great; we understand each other’s challenges in professional life and help each other with those challenges,” said Agrali. “We even have a paper together.”

Agrali received her B.S. in Industrial Engineering from Istanbul Technical University. (She decided on her major while in her second year of high school when her teacher explained the value of supply chain analysis with an example involving Good Humor Ice Cream.) While most of her classmates went on to work in industry, she decided to continue her studies at Koc University, where she worked as a teaching assistant and research assistant for two years, earning an M.S. in Industrial Engineering. “I spent most of my time on campus studying and doing research,” she recalled. At one point, “I remember not leaving campus for four weeks in a row because of the class and research

load. At that point you either hate being in academia or love it; there is no point in between. I loved it!” she exclaimed with a smile.

This led her to UF, pursuing a Ph.D. in ISE and working with Dr. Joseph Geunes. Agrali’s work focused on developing solution algorithms for supply chain planning problems with nonlinear revenue and cost functions. “I’m happy that my advisor presented me with a broad set of problems to work on and also motivated me to pick the problems that I liked most,” reflected Agrali. She has flourished, already having published papers in outlets such as the *European Journal of Operational Research* and *Optimization Letters*. In preparation for her new career, she also taught the Facilities Planning course.

“Having Semra as a student was a pleasure,” said Geunes. “Her combination of discipline, creativity, dependability, hard work, and sense of humor made my job as an advisor extremely enjoyable, and I am quite proud to call her a former advisee.”

Taskin completed his B.S. and M.S. degrees in industrial engineering at Bogazici University. While pursuing his M.S. degree, he was also working at ICRON Technologies as a product consultant. “My job involved solving large-scale production planning problems for customers in several industries,” said Taskin. “I realized the power of mathematical-programming-based optimization techniques, and decided to pursue a PhD in optimization. I wanted to go to a research-oriented university with

strong programs in both ISE and CS.”

So Taskin chose ISE at UF, where he would eventually work with Dr. J. Cole Smith. His research has spanned numerous application areas, including facility location, network design and radiation treatment planning. His work has, or will, appear in *Operations Research*, *Discrete Optimization*, and the *European Journal of Operational Research*.

“Caner set a high standard for PhD students in our department,” said Smith. “In addition to developing into a world-class researcher, he was tireless in serving as a teaching assistant. We are thrilled to call him one of our own.”

While being married and graduating together has been great, it was harrowing during the job search process. “Finding a single academic job is hard enough; finding two simultaneously is even harder – especially in today’s economy,” said Taskin. “We literally had to conduct a global job search, which took months to finalize.” But it worked out in the end.

“I remember in my first year telling Dr. Geunes that I wanted to be an academician in Turkey after graduation. I cannot imagine any happier ending to my graduate life in Florida,” said Agrali. “I feel indebted to all my professors in the ISE department.” Taskin agreed succinctly, “I am so excited.” □

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ALUMNI NEWS



MARIO PADRON THE START OF A TREMENDOUS PH.D. PROGRAM

The 1960s were a tumultuous time for the Department of Industrial and Systems Engineering at the University of Florida. The College hired a new Dean, after nearly three continuous decades of leadership under Joseph Weil. The Department changed its name and offered a second degree. Finally, and not the least in importance, the Department embarked on a research mission, starting its Ph.D. program. Just as this was occurring, a young man in Cuba was heading to America in August, 1960 to study Industrial Engineering – at the Georgia Institute of Technology – after receiving his student visa and saving money through work with the energy firm ESSO. With intentions of playing football, he soon realized that practice would conflict with his 21 credits of study. Quitting the team, he joined the co-op program to pay for school, working in Linden, N.J., for ESSO again.

He married in December of 1961 and while on a break between quarters in Miami, he investigated how he might stay closer to Miami (and family) and not lose ground on graduation. In the Fall of 1963, he was admitted to Industrial Engineering at the University of Florida. He moved his wife and child, with a second on the way, into FlaVet, paying \$29 a month as he was living off a loan to complete his degree. He finished his degree in 1964.

Professor Dick Patterson went to work at Bell Labs for the summer of 1964. He told Padron, "You better know how to program when I come back," Padron recalled. Patterson returned with a problem in clustering, which Padron worked on for his M.S. thesis. "I remember staying up all night – I thought my heuristic was optimal and then I found a counter example," Padron remembered. That was a lesson in research, he recalled.

After finishing his thesis and M.S. in 1965, he had an offer from Bell Labs. Patterson encouraged him to "rub elbows with the best," and take the job. While there, he investigated continuing his studies at Rutgers or New York University. It was about that time when Patterson called to tell him that the Ph.D. program had been approved at UF. As Padron recalls, he and his wife rushed back to Gainesville

for the Fall 1966 term. "It was the only thing we agreed on in 50 years," he laughed.

As he had continued to research clustering problems at Bell Labs, he and Patterson knew that the research would not be an issue. Rather, it was just a matter of Padron finishing his courses – and completing the language requirement (two additional languages beyond English!). Spanish was easy, having completed the requirement early in 1967. The second language proved more difficult. After failing at German, he chose Latin, completing the requirement in late 1968 – four months after having passed his qualifying exam.

The start of the new program in Gainesville also coincided with the birth of his third daughter. So, to complement his assistantship from the department, he secured a job with the Latin American Data Bank on campus.

Padron defended his thesis, "An Axiomatic Basis and Computational Methods for Optimal Clustering," in the Spring of 1969 and officially graduated with his Ph.D. in June of

1969 – the first in the Department. It was at that time that he was faced with a difficult career choice: Become a faculty member in Sociology and Political Science at UF and continue to be in charge of the Data Bank or head to the University of Puerto Rico, Mayaguez (UPR) and become the first Ph.D. to work in the Department of Industrial Engineering. After much consternation, he headed south and started his academic career in engineering, teaching the operations research curriculum. Among his accomplishments there, he was Assistant Department Head in 1970 and Acting in 1972-73. He also administered a large NSF grant and most importantly, established the co-op program. The program recently celebrated its 30th anniversary, with over 6,000 students having completed the program.

It was in 1977 that he followed through on a passion of his: psychology. When Padron enrolled at UF as an undergraduate in 1962, he had strongly considered forgoing his engineering education in favor of the social science. With strong advice from the dean, he continued with engineering. However, two courses in industrial engineering dealing with human interaction and organizational behavior kept his interest. So in 1977 he took a two-year sabbatical at the University of Illinois in Urbana-Champaign where he completed coursework in quantitative psychology. Over the next three summers he completed his dissertation, "The Estimation of Salience Weights from Similarities Choice Data in Multidimensional Scaling with Application to the Assessment of Industrial Supervisors," earning his second doctorate in 1982. His wife, who had a B.S. in Psychology, finished her M.S. at Eastern Illinois during the sabbatical.

Returning to Puerto Rico in 1979, he became heavily involved in consulting with local industry – with much success – and developing a computer center in Industrial Engineering. When time rolled around for another sabbatical, he headed to Atlanta to work with AT&T (which became Lucent Technologies) after plans to return to New Jersey fell through. His consulting prowess continued as he increased productivity by 50% and reduced expenses by \$1.5 million per year on his first project. He had a number of other successes, which led union leaders to state that "he's too much for us," Padron recalled. In 1988, he headed to UPR for one year before returning to Atlanta to work for AT&T full time. In 1997, he transferred to Coral Gables as the Latin American Division Information Manager for Lucent to be closer to family.

He is now back at UPR, as Lucent funded a three-year visiting professorship in 2000 – instigated by the Chancellor who was his former student. He stayed at UPR and holds joint appointments in the business school and industrial engineering. He teaches the capstone IE course and, ever the psychologist, organizational behavior courses.

Looking back over his career, he reflected on his decision to become an IE professor, as opposed to staying at UF in the social sciences. "That was a good decision," he said, but "going to UF, that was an excellent decision." ☐

ALUMNI UPDATES

HJALMA E. JOHNSON (BIE 1958) received the University of Florida Distinguished Alumnus Award at this past spring's commencement.

DONALD R. GREENLEE (MEISE 1971) is a Chief Scientist of Systems Engineering, Test and Training for Science Applications International Corporation in San Diego, California.

LINDA PARKER HUDSON (BSSE 1972) was named the 43rd most powerful woman in business by *Fortune* Magazine. She is currently President of BAE Systems Land & Armaments Operating Group.

DAVID BRUCE MARTIN (BSISE 1983) is currently the Manager of Procurement Metrics, Processes and Controls for Lenovo Global Procurement (formerly the PC Division of IBM, whom he has been with for 22 years). He is married to a Gator (Physical Therapy) and has three children, ages 9, 11 and 13.

MICHAEL L. WASHINGTON, PH.D. (BSISE 1992) was recently promoted to Deputy Director, Preparedness Modeling Unit, U.S. Center for Disease Control and Prevention. The unit serves to advance the public health mission of the CDC and other health-related Federal agencies by supporting the development of policy-oriented quantitative modeling tools and analyses for use by federal, state, and local public health authorities.

PEDRO MANRIQUE (MSISE 1995) is a Commercial Upstream Manager for Chevron Petroleum Company in Bogotá, Colombia.

JOSHUA A. BASS (BSISE 1999) is a Manager of Strategy and Process Improvement for Florida Power & Light.

MALACHI BERNSTEIN (BSISE 2000) is a Senior Management of Strategic Sales for DivX, Inc. in San Diego, California. (He was previously with Intel.) He is also the UFAA Region 8 Representative for the Young Alumni Council (<http://www.ufalumni.ufl.edu/youngalumni/yac/>) and was recently appointed to a new UFAA Board of Directors Committee focused on Young Alumni and Careers. He has also served as Presi-

dent and Director of the San Diego Gator Club (<http://www.sandiegogators.com/sdgcofficers.htm>).

CHRISTIAN MONAHAN (BSISE 2003) is participating in the Operations Management Leadership Program in GE Healthcare. He is currently in his third rotation, serving as a Materials Site Leader in Wisconsin after having already served as a Global Sourcing Leader and Lean Leader. His final rotation will be as a Production Team Leader.

MICHAEL T. VENTO (BSISE 2006) serves as an Operations Manager for Intel Corporation in the Phoenix, Arizona high volume manufacturing facility. He has also spent time working in Santa Clara, California.

ROGER LEZHOU ZHAN (PhD 2007) is Director of Operations Research for CitationShares in Greenwich, Connecticut.

PRISCILA SILVA (BSISE 2007) is working in market research for Procter & Gamble.

SIMON DE LOS RIOS (BSISE 2008) earned a scholarship to study Virtual Power Producers, Distributed Generation and Power Systems in Lisbon, Portugal.

FRANK KRAEMER (BSISE 2009, MSISE 2009) served as the male commencement speaker at this past spring's commencement. He is now a Manufacturing Engineer at Pepsi Bottling Group in Orlando.

FRIENDS WE'LL MISS

1935 JAY W. BROWN (BSIE) Longwood, FL, Jan. 13, 2004 | **1949 CHARLES H. ASCHE** (BIE) Miami, FL, March 7, 2009

| **1958 ROBERT F. HENDEE** (BIE) Oklahoma City, OK, June 18, 2007 | **1959**

FRANK W. BLOECHL (BIE) Sarasota, FL, Feb. 15, 2009 | **1964 LLOYD N. WILSON** (BIE) Tampa, FL, Dec. 15, 2008 | **1975**

JUSTO I. CORRIPIO (BSIE) Allen, TX, Jan. 12, 2007 | **1982 ERNEST G. WEEKS** (BSISE) Springfield, VA, Dec. 11, 2008

ALUMNI NEWS

1936 INDUSTRIAL ENGINEERING GRADUATE: AN AMERICAN HERO

JOHN RICHARDSON

ALISON WAS BORN IN GAINESVILLE, FLORIDA IN 1912 AND DESTINED TO BE A GATOR. HE ENROLLED IN THE MECHANICAL ENGINEERING PROGRAM IN 1932 WITH A NUMBER OF POWERFUL FRIENDS, INCLUDING THE SON OF TIGERT. IN 1934, HE TRANSFERRED TO INDUSTRIAL ENGINEERING AND GRADUATED IN 1936, THE THIRD GRADUATE OF THE DEPARTMENT.

JOHN R. ALISON

B.S.I.E.

Engineering

Gainesville, Florida

Phi Delta Theta

White Friars



"I just wanted to be an Army Air Corps pilot and engineering was the right track to take. I am afraid I got through with the minimum amount of work," he recalled with a laugh.

Upon graduation, he immediately joined the U.S. Army Air Corps and was sent for training. "Academics in the Air Corps flying school were simple," he said. "I had already had it all in college."

When his training was complete, he was sent to Europe, before America joined the war, to train allies in the use of a variety of American made airplanes. He started in England, training pilots on the P-40 and then moved to Russia where he trained on the P-40, A-20 and B-25.

While fulfilling his duties, he repeatedly asked for a combat assignment. In June of 1942, he got his wish as he was shipped to the Asian theater to serve as Deputy Squadron Commander in the 75th Fighter Squadron. He was promoted to commander of the squadron by the end of his tour, as he

had earned both the Distinguished Service Cross and Silver Star. He was declared an ace with seven confirmed victories.

After the war, he served as Assistant Secretary of Commerce under President Harry S. Truman. He vividly recalled being in meetings with Orville Wright, of Wright Brothers fame, who was a member of the National Advisory Committee for Aeronautics, which preceded NASA.

Alison resigned from public service in 1949 to become President of Transit Van Lines, only to re-enlist in 1950 to fight in the Korean War. He retired from military service as a Major General in 1955 and entered the business world, eventually rising to Senior Vice President at Northrop Corporation.

Not surprisingly, he garnered many awards and recognitions over time. The Gainesville Regional Airport bore his name from 1942 to 1977. In 1979, the passenger terminal was dedicated to him. In 1994, Alison was inducted into the Air Commando Hall of Fame. The following year, he was inducted into the National Aviation Hall of Fame. □



**ALUMNI ROLL
CALL IN THE
CLASSROOM**

FIRST FEMALE IE GRADUATE: AN ADVOCATE FOR WOMEN ENGINEERS

WHEN **WILMA ANDREWS SMITH** MOVED TO GAINESVILLE WITH HER HUSBAND IN 1942, SHE DID NOT HAVE DREAMS OF ATTAINING A COLLEGE DEGREE – AFTER ALL, THE UNIVERSITY DID NOT ADMIT WOMEN UNTIL 1947. INSTEAD, SHE TOOK A JOB IN THE PRESIDENT’S OFFICE, SERVING AS A STENOGRAPHER FOR PRESIDENT JOHN TIGERT.

Her husband encouraged her to pursue coursework, if at all possible. It was—due to the efforts of Edith Potts, an executive assistant to the President. She would invite professors to the office “after hours” in order to tutor Smith and her co-workers. This went on for years, until it was possible for Smith to enroll in classes in the traditional format. She continued to work in the President’s office while taking classes one-third time until the mid-1950s. At that time, she realized that she enjoyed, and excelled, at mathematics, choosing Engineering — Industrial Engineering — as her major.

“I read *Cheaper by the Dozen* by Lillian Gilbreth,” she said, “and I tried to imitate her,” with regards to choosing IE. She increased her studies to half time while moving to the dean’s office, to work under Dean Joseph Weil.

Asked about her experience as the first female IE student, she recalled that for every professor that gave her a hard time, one would be extremely nice. “So it all evened out,” she remembered. And, “the students were so nice to me,” Smith recalled.

She completed her studies and graduated in 1959, the first female to do so in Industrial Engineering and only the sixth in the college. And she did not do it obscurely, serving as the Vice President of IIE, Secretary of the Benton Engineering Council, and an inaugural participant in the Society for Women Engineers. Nor did she do it easily — her daughter was born in 1947 and she divorced in 1959.

Upon completion of her degree, she returned to Tampa to pursue a M.S. in Industrial Engineering and Management Systems at the University of South Florida. The

department had just been started by Dr. John Wimmert, former IE Chair at UF. Smith completed her degree and stayed to teach for 13 years. When told that she would need a Ph.D. to stay on the faculty, she moved to a position in Engineering Technology at St. Petersburg College, teaching drafting and basic engineering courses. She retired after a further 13 years of teaching.

Through her time in academia, she served as an advocate for women in engineering — speaking at conferences and recruiting at the local high schools. And she is current on progress. When asked to guess what the current undergraduate population in the Department is female, she answered 35 percent — right on the money. Asked about it, she said, “I think it’s great.” □

Thad Bydlon (M.S. ISE '78)
Randy Ewers (B.S. ISE '92)
Trey Lauderdale (B.S. ISE '04)
Jorge Madariaga (B.S. ISE 1980)
Robert McClure (B.S. ISE '93)
Bill McElroy (M.S. ISE '02)
Richard Mitchell (B.S. ISE '92)
Roque Perez (M.E. ISE '03)
Ron Quinn (M.S. ISE '06)
Rudy Santacroce (B.S. ISE '92)



CELEBRATE OUR SUCCESS...

The Department of Industrial & Systems Engineering is celebrating its 75th Anniversary this year! The ISE Gator Nation is now over 5,000 graduates strong! Led by world-renowned faculty, outstanding students and tremendously successful alumni, the department's undergraduate and graduate programs are nationally ranked. Help celebrate with a gift to support the department's programs, students and faculty into the future. Your donation makes a difference!

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THROUGH THE MAIL

CHECKS should be made payable to the University of Florida Foundation, Inc. and sent to the Department of Industrial and Systems Engineering, c/o Tasha Martin, University of Florida, 303 Weil Hall, PO Box 116595, Gainesville, FL, 32611-6595.

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