



# Institute *of* Industrial Engineers

## Rensselaer Chapter

### **Faculty Advisor**

Prof. Mohamed  
Aboul-Seoud  
aboulm@rpi.edu

### **President**

Travis Lull  
lullt@rpi.edu

### **Vice President**

Tim Lang  
langt2@rpi.edu

### **Secretary**

Meaghan Faraca  
faracm@rpi.edu

### **Treasurer**

Maria Vallejo  
vallem2@rpi.edu

### **Events**

#### **Coordinator**

Lindsay Denton  
dentol@rpi.edu

Welcome back for the spring semester. On behalf of the IIE officers and members, I want to wish you the best of luck in all your endeavors. We have some exciting plans for this semester that you will hear about in future editions of this newsletter, and as always, in more emails from Lee Vilardi. If you have any suggestions or comments, please email one of the officers!

Also, please check out the new DSES website ([www.dses.rpi.edu](http://www.dses.rpi.edu)). There is a lot of new information and even a page for current students with many useful links and updates.

Best wishes,

Travis J. Lull

President/Editor

**Registration for classes is March 28 - April 11.** Do you know what classes to take? Which professors you'd prefer? Come to our next meeting **March 30th**, at **4:00 pm**, Union room TBA. Senior IME students will share their experience with classes and professors that will give you insight into the registration process. Members and non-members welcome! Interested freshmen always welcome!

## What Do Industrial Engineers Do\*?

Industrial engineers integrate human, information, material, monetary, and technological resources to produce goods and services optimally. Simply put, industrial engineering is the application of engineering methods and the principles of scientific management to the design, improvement, and installation of integrated systems of people, materials, information equipment and energy. Industrial engineers plan many details of a given business or service, including equipment layout, workflow, training programs and management control systems to aid in financial planning and cost analysis. You can easily find industrial engineers in such diversified environments as hospitals, where they might work on stream-lining an operating room to allow surgeons to work more effectively, or in an amusement park where they might work on mapping out an improved thrill-producing rollercoaster ride. Industrial engineers work at the Federal Bureau of Investigation where they apply the principles of industrial engineering to investigate relationships between people, processes and technology. In space, industrial engineers are helping to keep complicated aerospace systems functioning. Back on earth, industrial engineers work at a variety of companies, from Anheuser-Busch, to Federal Express, to Coca-Cola to Amazon.com. Industrial engineers are everywhere because just about every sort of business, manufacturing firm and service can benefit from what industrial engineers do, i.e., increase efficiency, productivity and quality by inventing new processes and systems.

The following quote from John Samuels, vice president of Norfolk Southern Company sums it up well: "Industrial engineer' is synonymous with systems integrator - a big-picture thinker, in other words. It's an employee who takes what exists today and conceptualizes what should exist in the future. A lot of engineers become disillusioned with the engineering profession because they get involved in minutiae or they end up on a CAD machine all the time, and they never get out in the operating environment. That's not what happens to an industrial engineer. IEs spend most of their time out in the real operating environment, coming up with scientific approaches to problems rather than seat-of-the-pants, temporary solutions" To apply this "scientific approach" to design systems, industrial engineers need to learn about the products or services being produced. Much of their work involves reviewing the individual steps of processes and learning about each task that workers perform and the equipment they use. At existing facilities, they evaluate the current setup of equipment. Once they understand a process, they determine the best way to set it up. They write reports and create diagrams that show their setup recommendations. They may recommend changing the sequence in which customers or products are processed or how many steps different workers complete. Major areas of specialization for industrial engineers include: Engineering economics and decision analysis, Service operations, Human factors (human-machine/computer interaction), Manufacturing systems, Optimization, Production, distribution, and material handling, Applied Statistics and Stochastic systems.

\*compiled from various sources on the world wide web.

## Post-Graduate Plans from Members of the Class of '05

### **Matt Siciliano**

After graduation this May, I'll be attending SUNY Oswego to pursue my teaching certification. My plan is to be a high school teacher. I'll have about one year left at Oswego and then I'm planning on getting my Master's of education and getting a job.

### **Jose Feliz**

After Graduation I plan on working for Verizon Communications in New York City as a Outside Plant Engineer. Also, I plan on getting a master's degree in Finance that I will hopefully begin next fall.

### **Tim Lang**

In May I will go on a summer internship at GE in Tennessee working to balance assembly lines. Following the summer I will enroll at North Carolina State University program for a Master's in Integrated Manufacturing Systems Engineering. At NCSU I hope to concentrate on Manufacturing Operations Management.

### **Peter Manoogian**

I am graduating with an IME degree this May and I am starting my full time position with ZS Associates this July. ZS Associates is a global leader in strategic marketing in sales consulting for mainly pharmaceutical companies. My position will largely entail maintaining client relationships and performing statistical analysis on prescription data to help ZS's clients spend their budgets wisely.

### **Betzy Skariah**

After I leave RPI, I plan to move back to New Rochelle, NY where I will actively work for my church St. Mary's Orthodox Church, Bronx, NY. I am also working for the America diocese of the North East region as joint secretary. I intend to work as an industrial engineer specializing in geographic information system technology for the transportation industry. Being near home will be a warm welcome after years at RPI.

### **Pinar Kuruc**

Upon graduation this May, I will be working for General Motors in their Assembly Plant in Ohio. My title will be an Entry Supervisor and I will be responsible for approx. 60 hourly employees making sure that the assembly line will run without problems while delivering high quality products. Also, I plan on continuing my education by working full-time and going to school part-time for my MBA.

## Wondering about Co-op?

What it was like or what people are doing right now? Here is some description from a Quality engineer's co-op and the info on two people presently on co-op doing Quality and Process Engineering and Commodity Engineering:

### Pratik Mehta

Saint-Gobain, Abrasives  
Quality Department  
IME Junior

Saint Gobain Abrasives is an industrial manufacturing setting. The Watervliet plant produces highly technical coated abrasives used in the wood working and automotive industries.

I directly report to the Quality and Process Engineering team. My main responsibilities in a broad sense focus on reducing downtime associated with the process and making machines/processes run more efficiently.

Some of the projects I will be working on include:

Analyzing downtime data associated with the process

Observing changeover procedures and identifying bottlenecks

Designing engineering fixes for bottlenecks associated with downtime

CAD for mechanical engineering department

### Sandra Harya

Schick-Wilkinson Sword  
Quality Engineer  
IME Senior

Going on co-op was one of my most valuable experiences since being at RPI. I went on co-op spring/summer of 2004, to work as a Quality Engineer at Schick-Wilkinson Sword. Having a co-op was great education and the best preparation for the real world. I gained a better understanding of myself, what I did and did not want to do, as well as how an Industrial Engineering degree applies in industry.

I was treated like a real engineer and worked on real projects, ranging from new product development to evaluating machines and measuring systems. Quality engineering relies heavily on statistics, so I am thankful our curriculum prepared me for that. Expect to be challenged in any position, and use that as an opportunity to learn. Co-op also gives you exposure to a range of positions, not necessarily just the one you are in. This is valuable information during the job search.

I recommend that every IME student go on co-op. I received a job offer in November for when I graduate in May. Without the experience on my resume and projects to discuss in the interviews, I am sure that I would still be searching now. Need extra convincing? Feel free to contact me at haryas@rpi.edu.

### Jenna Daeley

Pitney Bowes  
Commodity Engineer  
IME Junior

Work description: (Will include other activities as well)

Assist in the further development of the Direct Procurement Operational Leadership model.

Expand the US operational metrics to include PBUK performance, ensuring consistency of data and common methodology.

Support supplier quality requirements within OEM commodity assignments. May include onsite supplier capability assessments.

Assist in the new product development and launch process for OEM Products. (Sebring)

PO/Order analysis and placement in SAP, along with other quality system requirements.

Location: Pitney Bowes, World Headquarters, Stamford CT (Will require some travel between PB locations in Stamford and Shelton)

Group: Enterprise Procurement

Section: OEM Strategic Sourcing

Position: Commodity Engineer - Co Op

Pay Rate: \$17/hr