

Fall 2007

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First Edition of the Chemical Engineering Newsletter

We are very pleased to send to you Rowan Chemical Engineering's first Newsletter. The purpose of this newsletter is to keep you in touch with news from the university as well as other alumni. We are looking forward to producing this newsletter on a regular basis and look forward to your feed back. Please email your comments to let us know what you would like to see in future versions of this news letter.

The department has been extremely successful in both our educational and scholarship initiatives. In the Jr/ Sr engineering clinic we have the highest number of industrial sponsors. These companies are specialty chemical, petroleum, pharmaceutical, equipment manufacturers, and biofuels companies as well as a solar heating startup company. The company names include Johnson Matthey, Novartis, Sunoco, Helios, Omega Engineering, and Pfizer. In addition to our industrial funding we also have projects funded by NSF, EPA and NJDEP. Future newsletters will feature several of these projects as well as highlight some of the activities of our faculty.

Chair's Notes

Of prime importance to our department is the activities of our AIChE student chapter and of course the Chem-E-Car which we are proud to say once again qualified for AIChE Nationals in Salt Lake City!



Chemical Engineering – Highest Ranking in US News & World Report

A strong round of applause to all Rowan Alumni, Faculty and Industry friends! You have helped to make Chemical Engineering at Rowan one of the highest rated Chemical Engineering undergraduate programs in America. In the 2008 "U.S. News & World Report's" America's Best Colleges we were ranked as the 2nd best chemical engineering program at a university with a

Robert P. Hesketh

primary focus on undergraduate education. You will be interested to note that we are the top ranked department at a public university; the top ranked department is a private institution.



New website

We have just updated the departmental website. Please have a look for your class picture located in the alumni section of this website! The website can be found directly at <http://www.rowan.edu/che>. This website contains many new pages that help attract new students, guide current students and give information to industry about our clinics. You can also check out what the AIChE Student Chapter is doing! I want to end this column by thanking Susan Patterson, Department Secretary and Managing Editor for all her hard work on this inaugural newsletter together. Please send back comments on our new look on the web.

AIChE Student Chapter wins Outstanding Chapter Award for 2006-2007!



The Rowan AIChE student chapter has been selected as an Outstanding AIChE Chapter for the 2006-2007 school year. This award is in recognition of the membership and participation of the students and faculty, the quality and quantity of your meetings and activities, and our chapter's involvement in local, regional and national events. This award was announced at the AIChE Annual meeting on November 4 in Salt Lake City, Utah.

The AIChE student chapter conducted a number of recent activities to collect this award:

- a great lineup of guest speakers from industry, and great student attendance at these events
 - strong attendance at local section events, including the annual CEO lecture at the Union League in Philadelphia and the Yards Brewery tour
 - large numbers of students participating in the spring regional and fall national AIChE conferences – approximately 30 students attended the spring regional and 13 students attended the national conference in San Francisco.
 - service activities & "chapter fellowship events" – assisting with department open houses, Clean and Green trash pickup event, Relay for Life, and intramural sports teams.
- (Con't pg 4)

Alumni Spotlight – Jamie Ginn 2004



We thought that you would like to know that one of your fellow chemical engineering alumni was crowned Miss Delaware in June 2006! Her platform for the Miss America pageant was to increase awareness for the Crohn's and Colitis Foundation of America. She raised over \$20,000 for the cause.

As Miss Delaware, she garnered more than the usual publicity from being the first DuPont employee to win this title. For example, The Washington Post featured her in an article with the title, "Beauty And The Beaker," on Sunday, March 25, 2007. Earlier, she was featured in Chemical & Engineering News (December 4, 2006 Vol. 84, No. 49, p. 84) with the headline: "Miss America contestant representing Delaware is a chemical engineer, actor, and dancer!" She even agreed to be the featured speaker at the Fall 2006 Engineering Open house! Jamie has returned to chemical engineering and currently works as an engineer in DuPont Engineering Research & Technology (DuET), specializing in engineering evaluations and sustainability.

**Keep in touch —
promotions, employment
changes, address
changes...!**

**Is there something special
you want all ChE's to
know? You may be the
next person in the
Alumni Spotlight**

Send us your story!

WHERE "R U" NOW?

2000

William Cardone- is the Refining Manager for Johnson Matthey North America, and is working on his MBA.

Theresa Cassino, PhD.- is a Postdoctoral Fellow at the University of Pittsburgh Department of Orthopedic Surgery, Children's Hospital of Pittsburgh Stem Cell Research Center. She is conducting research on muscle-derived stem cells for cardiac repair applications.

Brian Dericks- is a Chemistry and Physics teacher at Gateway Regional High School in Woodbury Heights, NJ and enjoys having the opportunity to inspire and challenge future scientists and engineers.

Christopher Dromgoole- is a process engineer working in the Product Commercialization Group for The Hershey Company. Chris is one of the key engineers on some of Hershey's new product launches, such as Hershey's S'mores Bar, Snackbarz, Take 5, Smartzone Crunchy, and Kissables. Most recently he was the lead engineer on Hershey's latest product Reese's Whipples. He is married with one son and a daughter on the way.

Tim Francis- is a Laborieter (Laboratory Leader) currently working for BASF in Ludwigshafen, Germany. He is working on permeation and sorption measurements as well as developing new/and improved foams (e.g., insulation for buildings).

Kimdung Ha- is working for DuPont Co. She started in West Virginia as a process/

project engineer and is now back in NJ working on the production of Nomex® and Kevlar®. Kim has one son studying Marketing at Rowan and expects to send his brother next year.

Alex Maciag- is working at Beechnut Nutrition Company and is leading the process design (Prep, Blending, and Filling) of their new facility scheduled to be running June 2009.

Jason Russell- is working as an Environmental Manager for Gamesa Wind US Operations which is a company that produces windmills.

2001

Daniel Bosak- received his MS from Clemson and is married to Maggie Kilakovsky (Rowan ECE 02). Dan works for Blue I Water Technologies, a global water treatment company. As VP of Engineering and Technical Services he is the technical contact for North, Central South America and Australia.

Claire Bracher- works part of her time as a project engineer for Keating Environment, Inc. in Exton, PA and the other as a personal trainer. She turned her passion for the gym into a career!

Kristin Phillippi (Evano)- graduated with an MBA from Rutgers in May 2005. Currently she is working as a process engineer at GGB in Thorofare. She is married to Lew Phillippi (Rowan '99) on September 17, 2005.

Ken Smith- is pursuing his PhD at the University of MA doing research on reactive molecular dynamics. The focus of the work is in developing fire safe polymers.

Daniel Sweeney- is completing his PhD at Clemson on the processing and properties of carbon nanocomposite fibers. He is married and is currently between cities maintaining a house in Atlanta in addition to working in Clemson.

2002

Benjamin Fratto- is working at Sybron Chemicals Inc. responsible for plant regulatory upgrades and improvements to process operations. He is also involved in youth ministry in the Camden Diocese.

Steve Koski- is working for Entech Instruments out of Simi Valley, CA installing and repairing analytical instrumentation.

Brian Kuritz- is the Residential Vinyl Process Engineering Manager of the Resilient Flooring Division of Mannington Mills, Inc. He recently led the implementation of Mannington's new print registration system, where they are now working to reduce their print registration defects by 50%.

Tom Kurzeja- is a Senior Engineer, AP1000 Balance of Plant (BOP) Engineering for Westinghouse Nuclear in Monroeville, PA. The AP1000 is one of four new nuclear plant designs to receive design certification from the NRC. Tom married Margaret Brewster in December 2006.

Rahn McKeown- is working for Glaxo Smith Kline as a Crystallization Scientist in the Particle Science and Engineering group. He is living in

Pittsboro, NC with wife Emily and son Tyler (with another on the way). Rahn is currently serving on the Chemical Engineering Industrial Advisory Board.

Shaun Rendall- is working at the Sunoco Eaglepoint Refinery in Westville, NJ as the energy coordinator for the plant. He monitors the fuel gas and steam consumption.

2003

Michael Lynch- is working for the Fuel Products Division of ExxonMobil Research and Engineering in Paulsboro, NJ. He conducts product quality investigations and provides technical support for the Fuels Marketing business unit. He is currently pursuing an MBA from Rowan.

Rebecca Santiago- is working as a Chemical Engineer for Schlumberger on Perforating Gun Systems. She is currently living in Houston, TX.

Andrew Toback- Andy joined Environex Inc., in Wayne PA. Environex consults primarily for the power industry, and he has successfully reduced NOx emissions by over 90% in 600 megawatts of power generation plants in 2007. Andy also works parallel to the PA Fish and Game Commission to control the animal and fish populations.

2004

Sarina Colligan- received her MS from Rowan in 05 and is now employed with Infineum (a joint venture between Shell and ExxonMobil) as a Process Specialist. They produce lubricant additives for automotive, heavy-duty diesel and marine engines as well as additives for fuels and refineries. She is engaged to be married to Mike Hatton (BS Rowan 04, MS Rowan 05) in July 2008.

Daniel Fichana- is working at Bristol Myers Squibb in New Brunswick in R&D. He is responsible for the development, implementation and validation of Process Analytical Technology as in-process controls for the pilot plants and transferring the in-

process controls to the manufacturing sites.

Michael Hatton- is a Process Engineer at DuPont Imaging Technologies in Parlin, NJ and he is working on Cyrel Packaging Graphics. He is engaged to Sarina.

T.J. Lee- is working as a Process Engineer at Valero and is about to begin the Master of Engineering Management program here at Rowan. He resides in Woodbury.

Megan Moran- Spent two years in Chicago working in engineering outreach. Currently living in Morgantown, WV, she is a 1st year grad student at WVU pursuing a MS in Human Nutrition. The project is researching the effects of omega-3's on asthma in children.

2005

Carly Dusseau (Bock)- is conducting research on sediment transport modeling on a New York City reservoir at Michigan Tech. She expects to graduate this winter. She married Robert Dusseau (CS 05) in June 2005.

Krystal Wrigley (Russell)- is working in the Fuels Products Division with ExxonMobil Research and Engineering. She is involved in Logistics for Formula One Racing Fuel.

2006

Kristin Ackermann- works for Foster Wheeler USA Corporation on the design of delayed coker gas plants for various refineries.

Richard Dominiak- works at Foster Wheeler in Clinton, NJ. The job entails the thermal design for different types of fired heaters. He still plays soccer in his spare time.

Donald Kessler- is working towards a PhD at the University of Delaware for Professor Norman Wagner's Research Group. He is currently researching field responsive materials using shear-thickening fluid composites.

Richard Pelletier- is working for Inven-sys Process Systems as a Technical Support Specialist providing training for all Simsci-Esscor products. He is an active member of the NJ Epsilon chapter of Phi Kappa Psi at Rowan.

Amanda Rohs- is working for Foster Wheeler USA Corp on front end design for delayed coker gas plant equipment.

2007

Sonia Berberena- works at GEO Specialty Chemicals in Gibbstown, NJ as a Production Engineer. She troubleshoots problems with production and looks for ways to lower costs. She resides in Deptford, NJ.

Nick DeSantis- is working at Sunoco Eagle Point Refinery in Westville, NJ. He is the Technical Process Engineer and his responsibilities include monitoring catalyst activity, troubleshooting unit upsets, and optimization of unit operation. He continues to run/race competitively for a South Jersey based track club.

Laura Kuczynski- just started working for Merck in West Point, PA with a group that provides engineering support for the purification of the vaccine Gardasil. She resides in Landsdale, PA.

Keith Riegel- is working in DuPont Engineering's Process Dynamics and Control Group in Wilmington, DE. Recently Keith helped obtain and analyze fermentor samples at a Bio-PDO plant in Tennessee using techniques he learned while at Rowan.



The most recent ChE's -
Class of 2007

Bug Power

An application for Rowan ChE's first patent entitled, "ETHANOL RESISTANT AND FURFURAL RESISTANT STRAINS OF E. COLI FBR5 OR PRODUCTION OF ETHANOL FROM CELLULOSIC BIOMASS," has been submitted based on the work by Professors Brian G. Lefebvre, Gregory B. Hecht, and Mariano J. Savelski. This patent is a direct result of the research and engineering clinic work that has been done in both the chemical engineering and biological science departments.



From left to right: Alvin Addu, Richard Pelletier, Michael Ritchie, Marc Manganelli, Brian Lefebvre, Mariano Savelski, Salim Shaikh, Gregory Hecht

**ChE's
First
Patent!**

AICHE Award (Con't)



These events throughout the year are evidence of the outstanding nature of the AIChE student chapter at Rowan University, which provides a great forum for Rowan chemical engineering students to learn from each other, from students at other universities, and from chemical engineers currently in the workforce.

Student Accomplishments

For the second time a student at Rowan Chemical Engineering has won first place in the oral presentations at a regional AIChE student meeting! **Lisa Scodari (07)** won the Paper Competition at the American Institute of Chemical Engineers (AIChE) Regional Conference at Bucknell University on April 21st. Her paper was entitled "Retrofit of Sour Water Networks in Oil Refineries: A Case Study." She has earned the privilege to represent the region (which includes 16 Universities) at the National AIChE competition in Salt Lake City, Utah in November 2007.

Rowan Chemical Engineering Students won the Zeisberg Award for best laboratory report from the Delaware Valley Section of the American Institute of Chemical Engineers (DVS-AIChE)! The report was by **YeJi Shin, Dan Urban, and Ray Zaborowski** and titled, "Barium Sulfate Crystallization."

Chemical Engineering Student, Thor Farnsworth, on the following team: **D. Scrivani, D. Giacobbe, T. Farnsworth, R. Smith and J. McDonough** (2007) Photodegradation of NDMA, 2nd Prize, NJAWWA Student Poster Competition, Atlantic City, New Jersey, March, 2007

Faculty News

2007 Best Paper in the International Division for ASEE to Professors Drs. Gephardt and Wyrick and students.

This Best Paper Award is presented by the International Division of ASEE annually for the best paper presented (and published in the proceedings) of the Annual Conference. The paper is titled, "Developing Global Engineers: An Integrated Approach to International Projects," by **Z. Otero Gephardt, Joshua R. Wyrick, Dustin M. Kuzan, Carolyn D. Braun, Jared S. Krause, David M. Santino and Mary E. Wellspeak.**



outstanding and sustained development of laboratory experiments, experimental courses or projects that exhibits innovation, relevance to the real world, experiential learning and student motivation.

2006 Chester F. Carlson Award (ASEE) to Dr. Robert P. Hesketh

The Chester F. Carlson Award is presented annually to an individual innovator in engineering education who, by motivation and ability to extend beyond the accepted tradition, has made a significant contribution to the profession. The award is sponsored by the **Xerox Corporation.**

2006 Robert G. Quinn Award (ASEE) to Dr. Stephanie Farrell
The Robert G. Quinn Award is a national Society-wide award sponsored by **Agilent Technologies** which recognizes distinguished accomplishments in experiential education. Candidates must have demonstrated leadership in engineering education, and a record of



Drs. Gephardt, Farrell and Hesketh gave a Workshop at the ASEE Summer School for Chemical Engineering Faculty. July 27–August 3, 2007 at Washington State University in Pullman, WA. Chris Del Vecchio and Alvin Addu developed the coffee experiment for this workshop! As you can see, we enjoy teaching faculty from other institutions what we do at Rowan!

Founding Chair's Statement



**"Do you Remember When" ...
Dean Tracey recruited you with the
"Build it and he will come" speech?
Freshman Engineering Clinic lab was in
Memorial Hall?
Chemistry, Physics and Biology were in
Bosshart Hall?
Our offices were in the Library?
Labs in Rowan Hall had nothing in them
but lab benches?
Dr. Slater had hair (Oops – wrong
school!)**

Safety? Safety!

Industry considers safety a high priority, so should academia. Not only is it necessary to practice safety, it is beneficial to have a formalized program. In the Rowan University Chemical Engineering Department, we have done just that.

All of us working in the Chemical Industry are familiar with the emphasis that companies place on safety. Major manufacturing facilities cannot safely operate without a serious, employee buy-in attitude. The same holds true for the academic laboratory. With the continual influx of new clinic projects, new team members each semester and the relatively short experimental window, research equipment and procedures need to develop rapidly. In order to enhance safe practices in all aspects of laboratory operations, the department has created a Safety Committee. I am pleased to serve on this Committee along with Dr. Zenaida Gephart and Adjunct Professor, Dr. John Natoli. The Committee will conduct four safety audits per semester and report the results at department meetings. The safety audits will add to our existing safety practices (JSA's and Permission to Start forms) and will include detailed reviews of equipment and procedures. The first audit resulted in a thorough understanding of our safety status. Label-

These were the memories of our first class who came in September 1996 and graduated in May 2000. Since then chemical engineering students at Rowan have seen many great changes on campus. We now have labs "filled to the brim" with advanced equipment and instrumentation for instruction and to support our engineering clinic program. A new \$45 million Science Hall was opened in Fall 2003. The first building on West Campus, Samuel Jones Innovation Center, will open in 2008 and have labs for the College of Engineering. We have faculty and staff committed to excellence in delivering a high quality program. We are quite proud of the fact that we are now rated as the #2 chemical engineering program in the country at an undergraduate university by "U.S. News & World Report".

I hope you and your classmates are achieving the same level of success in your professional and personal lives. I have been pleased to see many of you when you have

stopped by campus or seen me shopping in Home Depot or Shop Rite. It always makes my day when I see one of my Rowan "kids" and find out how you are doing. Whether it is industry, government or education, I know you are using those skills we taught you and positively impacting society. For those of you in jobs far away, please feel free to e-mail me and your former professors let us know how things are going. I love getting pictures, so if you have any to share please send them to us.

Remember what I told you when you were my students, "when you go out into the working world you are ambassadors for Rowan Chemical Engineering". We are proud of you and we hope you are proud of your *alma mater*, and will help the past, present and future current chemical engineering students at Rowan.

C. Stewart Slater

Lab Views

By Marv Harris
harrism@rowan.edu



ing kits have been distributed to all groups and custom-made, laboratory-specific posters detailing chemical labeling practices are in place. The chemical storage room has been redesigned to store not only large, unopened quantities, but also infrequently used small quantities of chemicals. This allows for laboratory storage of "in use" chemicals and significantly enhances the safety of laboratory operations. The Permission to Start Experiments form has been revised to include storage and disposal procedures. MSDS sheets are reviewed prior to start up. This is an excellent beginning toward strengthening our safety practices. The challenge is to institute practices that insure safety in the laboratory and can be maintained from year to year. The Rowan faculty, staff and students have a strong commitment to safety..

We would welcome your input in these initiatives. Your company may have safety forms and procedures that Rowan should consider adopting. Please send me your comments and suggestions. The Department is open to your suggestions and is committed to continuous improvement in the safe operation of our laboratories. This not only makes our work environment safer, but will help students make the transition to industrial laboratories and chemical plants.

Engineers in Rowan Administration



Dr. Newell is seeing what it is like to be an administrator this academic year. He has accepted the position of Interim Associate Provost of Academic Affairs and is assisting our new Provost **Ali A. Houshmand**. Dr. Houshmand came to Rowan University in September 2006 from Drexel Univer-

sity where he served as associate provost for academic affairs, dean of the Goodwin College of Professional Studies and interim provost and senior vice president for academic affairs. So what is Jim doing in administration? He is in charge of The Thomas N.

Bantivoglio Honors Program, Faculty Center for Excellence in Teaching and Learning, Center for the Study of Student Life, Rowan Seminar, the Registrar's Office, and ROTC. He serves on five task forces dealing with enrollment management, undeclared majors, strategic planning, commencement, and general education. In addition, he works closely with the Provost on issues of curriculum, accreditation, academic policies, academic calendar, university catalog, program review and assessment, student grievances and academic dismissal. In other words he does what ever the Provost asks him to do!

Dr. Robert Hoffman—Remembered — 1935-2006

The Chemical Engineering Department lost a friend on November 7, 2006 with the passing of Dr. Robert Hoffman. As an adjunct professor in several senior Chemical Engineering courses, Dr. Hoffman had worked with every class of senior Chemical Engineering students at Rowan since 2000. Dr. Hoffman had a wealth of industrial experience which he shared enthusiastically with students in Chemical Plant Design, Unit Operations, Process Component Design, and Process Safety courses.

Dr. Hoffman began his career as a chemical engineer in 1958 with Thiokol Corporation in Trenton, NJ. In his 20 years at Thiokol, he served as Technical Director, Research and Product Manager, and Plant Manager. From 1979-1997, he was the Technical Director of the Polyurethanes Division at ICI Americas. Dr. Hoffman authored two patents related to polymer preparation and composition. Dr. Hoffman received his Ph. D. from the University of Pennsylvania in 1967.

Dr. Hoffman helped to create a world class chemical engineering department at Rowan University. He had many discussions about chemical engineering with the new Chair Stewart Slater and taught the first engineering class aspects of safety. He was one of our original industrial supporters from ICI and gave one of the first donations to the chemical engineering department. These interactions were followed by plant tours for students and then many courses that he helped develop and teach. His extensive knowledge of the chemical industry gave our students invaluable practical design and process safety experience. He also gave our faculty excellent ideas on how to teach design and safety at Rowan. We will continue to use his lecture on safety with the seniors. Dr. Hoffman was well liked by faculty, staff and students who enjoyed his positive attitude and wealth of knowledge.

Dr. Hoffman had a dynamic and vibrant personality and a positive outlook on life. He often talked about his family, church



Dr. Robert F. Hoffman, Adjunct Professor of Chemical Engineering

Ph.D. Chemical Engineering
University of Pennsylvania
MSE Chemical Engineering
Princeton University
BS Chemical Engineering
Drexel University

and United Way activities. He has made a mark on society by helping others. We will all miss the enthusiasm, energy, and industrial expertise that he brought to Rowan's Chemical Engineering Program.



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