

CONNECTION

WINTER 2010

Greetings from the Department Head

Enrollments, research funding grow substantially

Dear Friends and Alumni of the Virginia Tech Department of Chemical Engineering,

Greetings from Blacksburg. I hope that 2010 is off to a great start for you.

It is once again my pleasure to present to you the annual newsletter of the Virginia Tech Department of Chemical Engineering and let you know about some of the recent events in the department.

Chemical engineering is currently a 'hot' major. As an example, our spring semester junior classes this year (Mass Transfer, Heat Transfer, Process Control, etc.) have enrollments of about

105 students each. At the rate we're growing, our graduating class will soon be the largest in at least 30 years. I believe this expanding interest is a testimony to both the quality of our undergraduate program, as well as to the increased awareness among students of the value of a chemical engineering degree. I firmly believe that the world needs highly qualified chemical engineers now more than ever before, and it is gratifying to witness this recognition by



Walz

our entering students.

Fortunately, our department is continuing to grow in other important areas as well. For the fifth consecutive year, we successfully recruited a new faculty member to our program. Dr. Chang Lu, previously at Purdue University,

joined us as an associate professor in December 2009. Dr. Lu's research is focused on the design and development of micro-scale transport devices (i.e., microfluidics) for biomedical research,

such as understanding the mechanical properties of cells. Extremely successful at Purdue, he earned both the prestigious NSF Career Award and the Coulter Foundation Early Career Award. We are both fortunate and happy to have him join us.

In addition, the amount of external funding brought in by our faculty to support their research programs increased significantly last year. While the federal stimulus program certainly helped, a perhaps more important factor was the many collaborations that have developed among our faculty, especially between our more established faculty

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Lu joins faculty

We were pleased to welcome to the department Professor Chang Lu, who joined us in December 2009 as an associate professor. Previously, Lu had been a faculty member in Purdue University's Department of Agricultural and Biological Engineering. He focuses his research on the design



Lu

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Baird named Giacco Professor

Professor Don Baird was named the Alexander F. Giacco Professor of Chemical Engineering by the Virginia Tech Board of Visitors. Baird is internationally known for his expertise, research and teaching in the field of polymer rheology and its application to polymer, biopolymer, and polymer composite processing. His research utilizes both theoretical and experimental tools, and he continues to find ways to apply these tools to new areas of research, including fuel cells and bio-materials. During the past 31 years, he has been the principal or co-principal investigator on research funding totaling more than \$33 million, has authored



Baird

more than 153 peer-reviewed publications, 107 refereed preprints, 43 other publications, 10 book chapters, and a major textbook. He has mentored 38 Ph.D. students, 12 M.S. students, 12 post-doctoral researchers, and two scientists.

Baird has won many awards for both his research and teaching, including the Jack Breslin Award from Michigan State

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FACULTY AND STAFF NEWS

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University, the Dean's Award for Excellence in Research, the Dean's Award for Excellence in Teaching, and the DuPont Young Faculty Award. Last year, he received the International Award from the Society of Plastic Engineers, which is the highest award presented by the society. As an undergraduate at Michigan State, he was a member of the All Big Ten Football Team and the All American Academic Football Team.

The Giacco professorship is funded through the Alexander F. Giacco Endowed Presidential Chair Fund, initiated by a donation from Hercules Incorporated to honor the many contributions to business and education by Alexander F. Giacco, former president of Hercules and alumnus of the Virginia Tech Department of Chemical Engineering.

Professor **Ted Oyama**, the Fred W. Bull Professor of Chemical Engineering, was the 2009 recipient of the Catalysis Club of Philadelphia Award. Oyama was recognized for his outstanding contributions and leadership in catalysis research. His current research is focused in three areas: the oxidative transformation of hydrocarbons to high-value prod-

ucts, the development of novel catalysts for the upgrading of petroleum resources, and the development of membranes and membrane reactors for the selective separation of gases.

In addition to presenting an award lecture at a luncheon of the Club, Oyama received a plaque and a \$1,000 cash prize.

Professor **Erdogan Kiran** had another active year. He was a keynote lecturer at the first ever workshop on Supercritical Fluid Processing of Biopolymers and Biomedical Devices, held in Madeira, Portugal in November 2009, and was the invited guest lecturer for a week at the University of Valladolid's Chemical Engineering Department in Spain. He also gave an invited talk at the Karlsruhe Institute of Technology in

Germany. He is serving on the scientific committees of two international conferences on supercritical fluids that will be held later this year in Brazil and in Italy. A paper that he had published with visiting professor S. D. Yeo on "formation of polymer on particles with supercritical fluids" was recognized as the most frequently cited manuscript published in *The Journal of Supercritical Fluids* within the past five years.

The department is pleased to announce
See Faculty & Staff, page 3

Congratulations to Professor Steve Martin and wife Rebecca, who welcomed a son, Baden Anthony Martin, on June 1, 2009. Also welcoming Baden was older sister, Hannah.



Greetings - from page 1

and our recent hires. These types of collaborations are essential to obtaining research funding these days, and thus I expect to see even further gains in the upcoming years.

As I hope that reading this newsletter will convince you, our department is doing exceedingly well. While the ongoing reductions in support from the Commonwealth of Virginia to our university have been severe, chemical engineering has nevertheless

continued to grow.

One major reason for this success is the substantial support that we continue to receive from our alumni. From both the many smaller donations of \$50 or \$100 that we receive, to the much larger donations of \$100,000 or \$200,000 used to establish endowed scholarships and fellowships, your support has allowed us to not only 'weather the storm,' but to actually expand. I can assure you that your generosity is

deeply appreciated by everyone here – faculty, staff, and students – and that it is without-a-doubt making us a better program.

We continue to work to reconnect with our alumni, and some of our efforts in this area, such as our annual class reunions, are described in this newsletter. Even if you are not able to get back to campus, we would still very much like to hear from you, so please take a moment and complete our Alumni

Information Form. You can either use the paper copy at the end of this newsletter or the online form at http://www.che.vt.edu/for_alumni.php

I hope you have a wonderful 2010, and if you happen to be in the Blacksburg area, please feel free to stop by.

With best regards,
John Y. Walz
Professor and Head

FACULTY AND STAFF NEWS

From page 2

announce that **Dr. Eva Marand** has been promoted to professor of chemical engineering. Marand leads an active research program focused on the development of novel organic/inorganic composite membranes for gas separations, and on the development of carbon nanotube membranes for water purification and desalination.

Professor **Padma Rajagopalan** had an extremely successful year in research and outreach. She was a principal investigator on five research grants (three from the National Science Foundation, one from the National Institutes of Health, and one from the Jeffries Memo-

rial Trust) totaling nearly \$1.2 million. Rajagopalan's research is focused on the development of polymer-based biomaterials, such as scaffolds for cell growth.

In addition, she gave presentations and conducted workshops on Biomaterials and Tissue Engineering to a group of high school students at the Catholic University in Washington, to students enrolled in Virginia Tech's C-Tech² program for high school girls, and to students enrolled in the NASA INSPiRE program (Interdisciplinary National Science Project Incorporating Research and Education Experience).

In recognition of her accomplishments, Rajagopalan received a College of Engineering Dean's Award for

Outstanding New Assistant Professor in 2010.

Even though officially "retired," Professor Emeritus **Garth Wilkes** continues to be very engaged with the polymer science profession. Last year, he taught several short courses on polymer characterization for Johnson & Johnson, Abbot Vascular, and the American Chemical Society. He also published three papers on the structure of polymeric materials, served as an industrial consultant to several corporations, and served as an expert witness in patent trials concerning polymeric materials. In his spare time, Wilkes remains an avid outdoorsman.

STUDENT NEWS

Chemical Engineering

Class of 2009

Stevens Photography, Inc.
Christiansburg, VA

Scott R. Adams	Ali R. Al Mustafa	Paul T. Baranowsky	Kyle R. Barras	Bryan B. Bear	Matthew D. Bedell	Eric Boswell	Randolph E. Brown, Jr.	Peter E. Cacciola	Justus A. Calvin	Allison B. Chambliss				
Jeremy E. Chojnacki	Matthew A. Cleveland										Travis S. Conner	Julie D. Cushen		
Steven A. Davis	Zachary P. Frye	Steven T. Goff									Thu N. Ho	Sandra L. Hobson	Gregory K. James	
Michael D. Jones	Alexander T. Jordan	Rezaul Karim	Patrick G. Lafond								Bethany S. Lambricht	Chung-Han Lee	Lindsey A. MacQueen	Tighe N. Marrone
Richard E. May	Harold A. Metz	Victoria M. Moncada	Casey F. Morrison II	Roger A. Obeysekere	Abimbola A. Onasoga	Ryan T. Ordemann	Tabish M. Qureshi	Nicholas R. Rothenberg	Michael L. Salvatore	Kendra Shin	Tejas S. Shingote			
Robert C. Shubert	Jason C. Simas	Teresa M. Sellouin	William O. Souble	Nolan T. Swick	Solomon Tibebe	Huy T. Ton	Alex J. Turner	Eric B. Webb	Steven M. Wheeler	Sterling A. White				

STUDENT NEWS

B.S., M.S., and Ph.D. degrees awarded

The department awarded 52 B.S. degrees last year. Twelve of these students chose to continue in graduate or professional school after graduation.

The department also awarded the following M.S. and Ph.D. degrees during 2009:

Neeraj Agarwal, M.S.

Transient Shear Flow Rheology of Concentrated Long Glass Fiber Suspensions in a Sliding Plate Rheometer
Advisor: Professor Don Baird

Christopher Bashur, Ph.D.

Effect of Electrospun Mesh Characteristics and Mechanical Stretch on Bone Marrow Stromal Cells for Ligament Tissue Engineering
Advisor: Professor Aaron Goldstein

Jose Herrera-Alonso, Ph.D.

Polymer Clay Nanocomposites as Barrier Membranes used for VOC Removal
Advisor: Professor Eva Marand

Myoungbae Lee, Ph.D.

Solution-Casting of Disulfonated Poly(arylene ether sul-

fone) Multiblock Copolymer Films for Proton Exchange Membranes

Advisor: Professor Don Baird

Christopher McGrady, Ph.D.

Linking Rheological and Processing Behavior to Molecular Structure in Sparsely-Branched Polyethylenes and Model Polystyrenes

Advisor: Professor Don Baird

William Miles, Ph.D.

The Design of Stable, Well-Defined Polymer-Magnetite Nanoparticle Systems for Biomedical Applications

Advisor: Professor Rick Davis

Lindsay Sharp, Ph.D.

The Effect of Dynamic Fluid Flow Strategies for Bone Tissue Engineering Applications

Advisor: Professor Aaron Goldstein

Haiyan Zhao, Ph.D.

Catalytic Hydrogenation and Hydrodesulfurization of Model Compounds

Advisor: Professor Ted Oyama

Summer Unit Operations Laboratory Abroad

A record 33 students elected to take their summer Unit Operations Laboratory course at the Technical University of Denmark in 2009. Scholarships for the students were provided from generous donations from Novozymes and from alumnus Kelly (Drum) Belz (B.S. 1995).



Virginia Tech chemical engineering students (l to r) Bart Marsh-Slavin, Danielle Carey, Quin Costin, Bailee Roach, and Sarah Dyer sightsee in Copenhagen in summer 2009.

STUDENT NEWS

Department scholarship and fellowship holders

Congratulations to the following students who held scholarships and fellowships from our department during the 2009-2010 academic year.

Donald M. Cox Scholarship: **Thomas Lamp, Joseph Walker, Justin Crawford, Lawrence Stern**

Ralph Bogle Scholarship: **Erica Neverman, Kevin Harter, Daniel Schall, Christina Williams, Katelyn Gause**

Gerhard Beyer Scholarship: **Hannah Sibole, Mohammad Adeel, Jee Huh, Keon Lee, Frederick Knack, Aaron Gregg**

Gavin Starmer Scholarship: **Theresa Cutler, Bailee Roach, Kimberly Wade**

Dow Chemical Engineering Minority Scholarship: **Laura Angeleton, Alexandra VanDervort, Amanda Vermaaten**

Andrew Britton Scholarship: **Ryan Shaw**

John & Bernice Brooks Scholarship: **John White, Aaron Holley**

Michael & Lisa Kender Scholarship: **Aaron Gregg**

William E. Poorbaugh Scholarship: **John Adams**

Warren Gentry Scholarship: **Lindsey Jewett**

James and Jane Gary Scholarship: **Alexandra VanDervort**

CITGO Scholarship: **Lawrence Stern**

Felix Sebba Scholarship: **Theresa Cutler**

David Wallis Scholarship: **Bailee Roach**

Eastman Award for Excellence in ChE: **John Rokisky**

Richard E. Herron Scholarship: **Kimberly Wade**

Robert L. Duff Scholarship: **Danielle Carey**

William Conger Scholarship: **Amanda Kracht, Andrew White**

Bill and Ann Doumas Scholarship: **Quintin Costin, Ryan Shaw, Lindsay Myrick**

Maxine Shelly Turner Memorial Scholarship: **Emily Westfall**

Mike and Lisa Kender Graduate Fellowship: **Kevin Meyer, Heather Grandelli**

Lu - from page 1

and development of microfluidic flow devices, specifically for biomolecular sensing and cellular analysis applications. Lu received a B.S. degree in chemistry from Peking University, a M.S. and Ph.D. in chemical engineering from the University of Illinois, and worked as a post-doctoral researcher in applied physics at Cornell. He has received a Career Award from the National Science Foundation and a Wallace H. Coulter Foundation Early Career Award in Biomedical Engineering. His wife, Dr. Danfeng Yao, also joined Virginia Tech in December 2009 as an assistant professor of computer science.

Undergraduate student awards

Greg James, a 2009 graduate from the department, was selected as a recipient of the James Lewis Howe Award by the Virginia Blue Ridge Chapter of the American Chemical Society. The award is given annually to top senior students in chemistry-related departments at colleges and universities in southwest Virginia.

On the basis of her undergraduate research, **Sandra Hobson**, a 2009 graduate, was chosen to represent Virginia Tech at the 4th annual ACC Meeting of the Minds Undergraduate Research Conference in Raleigh, NC in April 2009. Virginia Tech was only allowed to send student representatives of four undergraduate research projects to the conference.

Hobson's research in theoretical chemistry was performed under the direction of Professor Edward Valeev of the chemistry department. In addition to her presentation at the ACC research conference, her paper, "Is the Adiabatic Approximation Sufficient to Account for the post-Born-Oppenheimer Effects on Molecular Electric Dipole Moments?", was published in the international journal, *Molecular Physics*.

Graduate student awards

Grégorio M. Vélez-Garcia, a Ph.D. candidate in macromolecular science and engineering, was selected as one of the two 2009-2010 SPE Automotive Composites Conference & Exhibition scholarship award winners. The award is for \$2,000. Vélez-Garcia will also have the opportunity to present his research at the SPE Automotive Composites Conference & Exhibition, scheduled for September 14-16, 2010 in Troy, Mich.

Chemical engineering Ph.D. candidate **Michael Heinzer** was awarded a \$10,000 fellowship from Eastman Chemical Company. Heinzer's research is focused in the area of polymer processing, specifically for solution-cast membranes.

Both Vélez-Garcia and Heinzer are advised by Professor Don Baird.

AIChE update by chapter president **Quin Costin**

Virginia Tech's AIChE student chapter has been very active this year. During its monthly meetings this fall, guest speakers discussed topics such as interviewing skills, graduate school, and utility production. Other extracurricular activities included a tour of the Virginia Tech Power Plant, and the annual Career Forum, which gave undergraduate students the chance to learn more about career opportunities with 12 visiting companies. In the spring, the chapter plans to continue its meeting agenda with guest speakers from Celanese Corporation, ExxonMobil, UOP, and the Virginia Biosciences Development Center. Additionally, it hopes to host a number of other

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STUDENT NEWS

Omega Chi Epsilon update

by chapter president **Bailee Roach**

Omega Chi Epsilon (the Chemical Engineering Honor Society) had a busy fall semester. It created a weekly study session for sophomores in physical chemistry. The group also had the opportunity to visit the Tall Oaks Montessori elementary school in Blacksburg. OXE put on a fun chemical demonstration and made silly putty. This semester the Montessori fourth and fifth graders will travel to campus and receive a tour of Virginia Tech's chemistry labs. After the tour, these students will be entertained with some hands-on magical chemical reactions.

OXE inducted 16 new members in the fall. Currently, it is planning trips to Château Morrisette as well as a tour of the Celanese acetate plant in Narrows, Va. Using support from Celanese (a corporate sponsor), the undergraduate lounge is housing two new computers and will soon add a white board.

The current officers of Omega Chi Epsilon are:

- President:* **Bailee Roach**
- Vice President:* **Danielle Carey**
- Treasurer:* **Andrew White**
- Secretary:* **Corey Leggett**
- Publicity:* **Christine Sargent**
- SEC Representative:* **Sarah Dyer**
- SGA Representative:* **John Settell**

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activities, and plans to attend the AIChE Regional Conference at Johns Hopkins University.

The AIChE student chapter at Virginia Tech was named a 2009 Platinum Winner in the national membership contest. Reaching platinum requires having 90 percent of eligible students at a university also be a member of the national AIChE organization – a level reached by only 20 chapters nationwide. The 2008-09 chapter president was John Rokisky, and the faculty advisor for the chapter is Professor Y.A. Liu.

The current officers of AIChE are:

- President:* **Quin Costin**
- Vice President:* **Erica Neverman**
- Treasurer:* **Andrew White**
- Secretary:* **Ryan Calvy**
- Social Chair:* **John Rokisky**
- Chem-E-Car Chair:* **Aaron Holley**
- Banquet Chair:* **Bailee Roach**
- SEC Representative:* **Bart Marsh-Slavin**
- SGA Representative:* **Mudib Rawoot**
- Webmaster:* **Andy Reagan**



Omega Chi Epsilon President Bailee Roach, right, works with a student at the Tall Oaks Montessori School.



A group of happy Tall Oaks Montessori students display their silly putty.

Virginia Tech Chemical Engineering Department

CONNECTION

John Y. Walz..... Department Head
Jane Price.....Coordinator
David Simpkins..... Designer

The Virginia Tech Department of Chemical Engineering Connection is a publication for the alumni of the Chemical Engineering Department published by the Chemical Engineering Department, Virginia Tech, Blacksburg VA 24061.

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DEPARTMENT NEWS

Department holds inaugural Graduate Student Symposium

On April 22, 2009, the department held the inaugural Chemical Engineering Graduate Student Symposium, organized and run by the recently-formed Chemical Engineering Graduate Stu-

dent Association (ChEGSA).

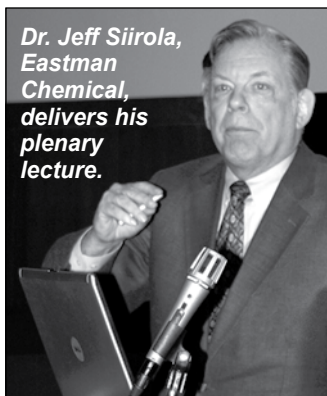
The one-day event featured 12 talks from graduate students about their research, along with another 12 posters.

One of the highlights was the plenary talk by Dr. Jeff Siirola from Eastman Chemical Company entitled "Sustainability in the Chemical and Energy Industries."

In the evening, a banquet was held for all graduate students, faculty, and staff of the department.

Eastman Chemical sponsored the successful event with a \$10,000 donation.

The 2010 symposium will be held Wednesday, April 8.



Dr. Jeff Siirola, Eastman Chemical, delivers his plenary lecture.

New fellowships and scholarships established in ChE department

Thanks to the generosity of some of our alumni, several new undergraduate scholarships and graduate fellowships were established last year.

These include the Ronald B. Lohr Memorial Scholarship, established in memory of alumnus Dave Lohr's (B.S. 1976) father (Dave is also a current and founding member of the Department's Advisory Board); the Joseph and Barbara Collie Scholarship (Joe, B.S. 1950, is also a member of the department's Advisory Board); the H. Robert Sanders Jr. (B.S. 1950) and Constance W. Sanders Memorial Scholarship; the Steven D.

Reese (B.S. 1975) Memorial Scholarship; and the Steven D. Reese Endowed Graduate Assistantship.

The department sincerely appreciates these gifts. These scholarships and fellowships not only help the department grow, they also provide invaluable opportunities for our undergraduate and graduate students.

Meet the new member of the Advisory Board

The department welcomes Lisa Price, (B.S. 1981) to its Advisory Board. She is currently General Electric's General Manager of Corporate Business Development, China, overseeing GE's business strategy for growth in China. Prior to that position, she was senior vice president of GE-Hitachi Nuclear Energy and chief executive officer of Global Nuclear Fuel, LLC, the legal entity that manages the Global Nuclear Fuel joint venture of

See Price, page 8



Graduate student Matt Green explains his poster to student Yeonhee Kim at the Graduate Student Symposium.

New sophomore seminar class

One of the key challenges in developing an undergraduate chemical engineering curriculum is finding time to teach students about all of the "other" pertinent issues about the discipline that do not easily fit into traditional classes. Some examples of these topics include: safety and environmental impacts, globalization, the changing energy landscape, and the range of job opportunities available to chemical engineers.

To help meet this challenge, the department recently added a required, one-credit sophomore seminar course to its curriculum. The course consists of weekly seminars on a variety of topics, many of which are given by practicing chemical engineers. A few examples of these talks are:

- *Environmental Regulation in the Chemical Industry* by Anthony Gaglione, Chemical Engineer, Eastern Research Group, Inc.
- *The Outlook for Energy: A View to 2030* by Jack Buono, Manager, Global Marine Transportation Optimization, ExxonMobil Refining and Supply Company
- *Corporate Safety Culture* by Wayne Punch and Alan Farley, Corporate Director Safety and Human Resource Managers, Milliken & Co.

Professor Dave Cox, who organizes and runs the course, is very interested in developing a pool of possible speakers, so if you have an interest in participating, please feel free to contact him at dfcox@vt.edu.



DEPARTMENT NEWS

ChE faculty get new lab and office space in ICTAS building

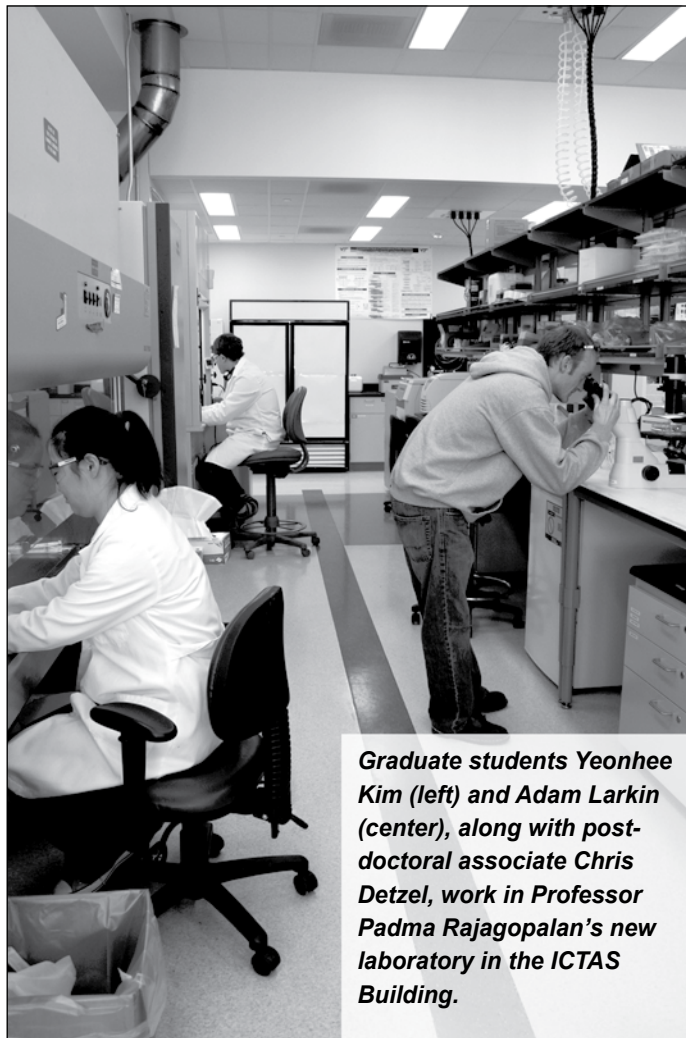
Thanks to the recent completion of the Institute for Critical Technology and Applied Science (ICTAS) building, several members of the chemical engineering faculty have obtained new lab and office space.

One of the goals of ICTAS is to bring together faculty from across campus working in key core areas, such as nanoscale science and engineering, sustainable energy, and renewable materials. Bringing together faculty

this way can greatly enhance collaboration and exchange of ideas.

As a result, Professors Aaron Goldstein, Padma Rajagopalan, Rick Davis, Abby Morgan and Chris Cornelius now have all of their research laboratory space located in the new building.

The building is adjacent to Randolph Hall, where the rest of the department faculty is located. This additional space has been crucial for the department's growth.



Graduate students Yeonhee Kim (left) and Adam Larkin (center), along with post-doctoral associate Chris Detzel, work in Professor Padma Rajagopalan's new laboratory in the ICTAS Building.

Price - from page 7

GE, Hitachi and Toshiba.

In addition to her chemical engineering degree, Price has an MBA from Tulane University and spent nearly eight years at Goldman, Sachs & Co. and two years at Deutsche Bank, where she focused on mergers and acquisitions in the energy, utility and oil and gas industries. Price is also a member of the College of Engineering Advisory Board.

ALUMNI NEWS

Classes of 1984, 1994 and 2004 Reunion Luncheon

On Nov. 21, 2009, the department hosted a reunion luncheon for the chemical engineering graduating classes of 1984, 1994 and 2004 at the Virginia Tech Inn and Conference Center.

In addition to alums and their families from these classes, several past (Professors Peter Rony, George Wills, Art Squires) and current (Professors Rick Davis, Don Baird, Preston Durrill) faculty also attended the event.

We plan to hold a similar event in the fall for alums from the classes of 1985, 1995 and 2005.



Pictured are some of the attendees at the Classes of 1984, 1994 and 2004 reunion luncheon.

CLASS NOTES

The information below was taken from the mail-in response cards that the department received during the past year, or through the recently-initiated on-line alumni feedback form. The on-line form can be accessed via the Alumni Feedback tab on the left-hand side of the department's home page (www.che.vt.edu). Our goal is to continue to publish all such information that we receive so that our alums can stay connected both to the department and to each other.

1941

Stephen Gano

Other degree(s): M.S., Chemical Engineering, Virginia Tech, 1947
Retired in 1983 from E.I. DuPont Co., Pontchatrain Works, LaPlace, La. Stephen resides in LaPlace with his wife Evelyn of 65 years.

1944

Walter H. Rosch

Other degree(s): M.S., Chemical Engineering, Virginia Tech, 1948
Has been married for almost 65 years to Wilma Fox, class of 1945. After graduation in 1948, he started to work in the R&D Dept. of the Atlantic Refining Co., in Philadelphia, Pa. After Arco, Walter moved to California to become part of Atlantic Richfield Corp. He then spent the rest of his career in Washington, D.C. working for the Atlantic Research Corp. and other small research and development companies. He retired in 1985.

Walter writes the following about his time at Virginia Tech:

"In my freshman year at the Va Tech Extension in Richmond, Va., I was given a ticket for speeding and the next day several classmates accompanied me to court to pay the fine. My classmates gave me the nickname 'speed' and it stuck ever since."

Walter states, "One of the more interesting parts of my career was in the Manhattan Project in Philadelphia for the Naval Research Lab in Washington, D.C. We were working on the thermal diffusion project for the Oakridge, Tenn., program in 1946."

1953

Stanford H. Roberts

Retired in 1986 from Witco Corporation after 32 years. He resides in Delray Beach, Fl., and can be reached at dotnstan@comcast.net.

1956

W. Robert Epperly

Other degree(s): M.S., Chemical Engineering, Virginia Tech, 1958

Bob resides in Mountain View, Cal., and can be reached at robert.epperly@gmail.com. He is a part-time consultant.

1979

John Kopfle

Other degree(s): MBA from UNC, Charlotte in 1983

John is the Director of Corporate Development at Midrex Technologies, Inc. He can be reached at jkopfle@carolina.rr.com.

1984

J. Scott Davis

Other degree(s): MBA, University of California, Berkeley, 1996

Is the Senior Vice President at Sumitomo Electric Compound Semiconductor Materials. He chaired the 2009 International Conference on Compound Semiconductor Manufacturing Technology in Tampa last May. He now lives in the Portland, Ore., area and would enjoy hearing from old classmates. His email is sdavis@sesmi.com

and telephone number is 503-349-2505.

1985

Dana Loncar Hawkins

Dana can be reached at hawkins_dana@hotmail.com.

1986

Mark A. Eiteman

Other degree(s): Ph.D., Chemical Engineering, University of Virginia

Mark is a professor of engineering, University of Georgia.

James Lisk

James recently joined Terumo Medical as a principal engineer, focusing on process development for production of new polymer-based medical devices. He resides in Charlestown, Md., and can be reached at jrlisk@yahoo.com.

Janice M. Mueller

Other degree(s): J.D., William

See *Class Notes*, page 10

Epperly named to Virginia Tech's Academy of Engineering Excellence

Mr. Robert Epperly (B.S. 1956, M.S. 1958) was a 2009 inductee into the Virginia Tech College of Engineering Academy of Engineering Excellence. Born in his grandparents' home in the tiny community of Rogers, part of Christiansburg, Va., his family moved a few months later to Pulaski, Va., where they operated a grocery store. His Virginia ancestors were among the Epperlys who co-founded the Zion Lutheran Church in Floyd County in 1813.

While a student at Virginia Tech, Bob met his future bride, Sarah, and they became the first couple to marry in the Blacksburg Presbyterian Church on the day she earned her bachelor's degree in 1957. He then joined Exxon (then called Esso), the company that had provided his graduate fellowship, at their facility in Linden, New Jersey.

Bob's responsibilities rose rapidly at Exxon. In 1968, he was named director of the fuels research laboratory, leading Exxon's research efforts to guide the removal of lead from gasoline. In 1972, he was named marketing advisor for the

Exxon Corporation, responsible for the coordination of marketing research in Exxon affiliates worldwide. After serving as manager of Exxon's Research Facility in Baytown, Texas, he returned to New Jersey in 1976 and negotiated a precedent-setting cooperative agreement with the U.S. Department of Energy and seven international companies



for a \$268 million program to develop a coal liquefaction process to commercial readiness. In 1980, Epperly was named general manager of the synthetic fuels department in Exxon Engineering. For the two years prior to his retirement from Exxon in 1986, Epperly was the general manager of corporate research and had general administrative responsibility for laboratories with an annual budget of \$120 million and 575 employees.

After leaving Exxon, Epperly joined the Fuel Tech Group, a publicly held international organization for developing and commercializing technology to improve combustion efficiency of petroleum-fired engines and boilers and to decrease emissions of undesirable combustion products. In 1992 he moved to Catalytica, Inc., based in Mountain View,

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CLASS NOTES

Mitchell College of Law, 1990

Janice is a professor of law at the University of Pittsburgh School of Law, where she teaches and writes in the field of patent and intellectual property law. The third edition of her book, *Patent Law* (Aspen Publishers), was published in April 2009. The book is a comprehensive, single-volume text on obtaining and enforcing U.S. patents, suitable for law students, engineers, business managers, and licensing professionals. Janice can be reached at mueller2@pitt.edu.

1987

Daniel W. Barineau

Other degree(s): M.S., Virginia Tech, 1988

Daniel states that he has been working for Lockheed Martin for the last 18 years, primarily developing hardware for the International Space Station through contracts at the Johnson Space Center. At the moment, he is the lead of the project office of Cargo Mission Contract, overseeing a group of about a dozen project managers building hardware for the external carriers office within the ISS program office. He is happily married and has three daughters. Daniel can be reached at dwbster1@yahoo.com.

Pragna Pravin Desai Joshi

Pragna is a project manager, energy chemicals at Fluor Enterprises in Greenville, S.C.

1992

Steven A. Jones

Steven, P.E. (Civil Engineering from Virginia) is the Deputy Operations Officer for the Naval Facilities Engineering Command Marianas, Guam. He is a reserve civil engineer corps officer in the Navy and is due to retire March 2010 at the rank of LCDR with 23 years of service.

Jean West Perry

Other degree(s): M.S., Chemical Engineering, 1994

Jean is a senior environmental engineer with Merck & Co., Inc. She has worked there since 1995

starting as an engineer to support production and then moving to the environmental engineering department in 1997. In January 2008, she married Gerald Perry. Jean can be reached at vtjeannie@embarqmail.com.

1998

Greg Caesar

Greg, wife Ann, and son, Ethan, live in Houston, Texas where Greg is a supervisor with ExxonMobil Chemicals. Greg can be reached at gscaesar@gmail.com.

Leonard E. Jenkins

Other degree(s): M.D., University of Pittsburgh School of Medicine, 2002

Leonard is an attending physician in internal medicine and resides in Pittsburgh, Pa.

Laura Atkinson Schneider

Laura reports that she and her husband are project engineers with Honeywell. They recently added twins to the family, Abby and Emma, born on Jan. 10, 1998. Laura can be reached at davidn-laura@cinci.rr.com.

1998

Andrew J. Capozzi

Other degree(s): MBA, UNC, Charlotte, 2007

Andrew is a marketing manager with PPG Industries, Inc. He is responsible for new product development, distribution strategies, and sales management.

2001

Rebecca Hall Blanton

Other degree(s): M.A., Teaching, James Madison University, 2006

Rebecca lives with her husband and three felines in Staunton, Va. She left engineering after working as a U.S. patent examiner. She currently is a seventh grade life science teacher at Wilson Middle School. She was recently voted Teacher of the Year for her middle school for the 2008-2009 school year. Rebecca can be reached at theblantons@comcast.net.

Rakesh Radhakrishnan

Other degree(s): MBA, Carnegie Mellon University, 2009

Rakesh joined Navigant Consulting Inc.'s energy practice as a managing consultant after an eight year stint as a research and product development engineer at United Technologies Corporation. In his current role, he provides strategy support and investment advice for private and public sector clients focused on creating businesses that leverage renewable energy and energy efficiency technologies. He can be reached at rageshan@yahoo.com.

Jeremy Ramont

Jeremy reports that after graduation he took a job with Merck at its West Point plant. In the summer of 2009, he moved to North Carolina to lead the site automation team for the design, qualification, and production of its new varicella bulk facility in Durham, N.C.

2002

Jason Pettrey

Jason is a supervisor at Exxon-Mobil. He and his wife welcomed their second child, Nathan, on March 25, 2009. Jason can be reached at jasonpettrey@hotmail.com.

2004

Jocelyn Brewster Mauldin

Can be reached at jobrewst@gmail.com.

2006

Joseph Murowany III

Is a refining engineer with Marathon Oil Company and currently pursuing an MBA at Wayne State.

2007

Adam Harber

Other degree(s): B.A., Chemistry, Virginia Tech, 2007

Adam is a process engineer with Nuclear Fuels Services, Inc., in Tennessee. He is currently pursuing an MBA from Tennessee Tech. Adam can be reached at agharber@nuclearfuelservices.com.

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The department gratefully acknowledges the following individuals, corporations, foundations and trusts for their support during 2009.

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See *Individual Donors*, page 11

CLASS NOTES

Individual Donors - from page 10

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Epperly - from page 9

California, as its vice president. Within two years he became president and director of one of its subsidiaries, Catalytica Advanced Technologies, Inc., a company focused on commercial markets for new catalyst technologies. He retired for the last time in 1997.

Today, he remains a consultant to the energy industry, as well as to Virginia Tech's energy initiatives. "I actually try not to stay busy now," he laughs, "as I spent my life being busy. I enjoy nature photography, and I continue to do some volunteer work with the National Academy of Sciences on matters of national importance." He was recently named a national associate of the National Research Council of the National Academies after some 30 years of working on various studies.

The Epperlys have three children and three grandchildren.

Deaths

1963

Lawrence Dupree passed away on Dec. 12, 2009. Larry's wife Ellen reports that he served in the Air Force for four years from 1963-1967. After his service, he received a B.A. degree in accounting from Manhattan College, Bronx, N.Y. He was a self-employed accountant. She goes on to say that Larry kept in touch with his "M" Company friends from Virginia Tech and continued to attend football games and reunions. Most recently he was invited to walk onto the football field with the Corp Alumni. He is buried at Calverton National Cemetery in New York. A true Hokie until the end, Larry was buried in his maroon Hokie shirt.

Online Alumni Information System

The department welcomes updates from our alumni about your lives and careers.

The easiest way of doing this is to use our online alumni update system, which can be accessed via the Department's homepage, www.che.vt.edu, and clicking on 'Alumni Feedback' on the left side of the page.

On this form, you can specifically state what level of privacy we

should use with your information. This information will be published in our *Connection* Newsletter.

As always, if you are more comfortable with paper and pen, feel free to complete the form at the end of the newsletter and mail back to us. We will publish all of these as well.

Again, this form allows you to specify exactly how much of the information you want published.

Giving to Chemical Engineering

One of the primary reasons that our department has been able to continue to grow and expand over the past five years has been the generous support of our alumni. Your contributions not only provide funds for the day-to-day operation of the department, but also support scholarships for our undergraduate students, fellowships for our graduate students, and even support for programs such as our external seminar program that brings outstanding researchers from other institutions here to Virginia Tech to interact with our faculty and students.

Clearly, your continued support is vital to our goal of becoming one of the top chemical engineering programs in the country.

To make it as easy for you as possible to support our department, we recently added a link on our homepage (www.che.vt.edu) that will direct you to a form for making a gift online. The link is entitled 'Giving to ChE' and can be found on the upper right hand side of the page.

Under the section of the form entitled 'Gift Information,' you can designate exactly where your gift is to be directed. If you type in 'Department of Chemical Engineering' in the space entitled 'Other Designation,' you can be assured that your support will come directly to us and that it will be used wisely.

Did you know that the Department of Chemical Engineering has a Facebook page? It's entitled Chemical Engineering Lounge – Virginia Tech, and it's open to the public.

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Virginia Tech
Blacksburg, VA 24061

www.che.vt.edu



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The Chemical Engineering Department is always interested in hearing from its alumni. Please take a few minutes to complete the following:

Full Name: _____ Name at Virginia Tech (if different) _____

Degree received at Virginia Tech / year: _____

Other degrees / Institutions: _____

Home Address: _____

Phone: _____ Fax: _____ E-mail: _____

Business Name: _____

Current Position / Title: _____

Please feel free to provide any additional information about yourself or your career (add more on separate sheet of paper if necessary):

The Department of Chemical Engineering would like to keep our alumni updated about the careers and lives of other alumni, either via the Web or the Department newsletter. However, we also respect each person's right to privacy. Thus, please indicate below the level of confidentiality that you wish us to maintain with regard to your information:

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c/o Ms. Jane Price, 133 Randolph Hall, Blacksburg, VA 24061
or, by e-mail at: jsprice@vt.edu