

THE VIRGINIA TECH DEPARTMENT OF CHEMICAL ENGINEERING

CONNECTION

SUMMER 2011

Greetings from the Department Head

Department has historic year

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

It is a real pleasure to present to you the 2011 edition of *Connection*, the newsletter of the Department of Chemical Engineering at Virginia Tech.

Some of you may notice that I'm a few months late getting the newsletter out this year. There is a very simple reason for this – the past 12 months has been an *extraordinarily* busy time in the department, with many positive activities and developments. Not only has this kept me busy, but it also means that I have much to tell you about.

While details about many of the events are provided in the newsletter, I'd like to mention a few of the more significant ones.

- In the spring of 2011, our department received a bequest of more than \$8.6 million from Mr. Robert Hord, an alumnus of our mechanical engineering department who obviously had a fondness for chemical engineers as well (Mr. Hord also left an equal amount of money to mechanical engineering). This is easily the largest gift



Walz

we have ever received, and it will be equally divided between support for undergraduate scholarships or graduate fellowships, and faculty chairs, professorships or fellowships.

- Construction of the Signature Engineering

Building, a nearly 160,000 square-foot building that will be the future home of our department, is scheduled to begin in August 2011. For those of you who spent time in Randolph Hall, you can understand our excitement at moving into this state-of-the-art facility.

- Chemical engineering was one of three departments in the university recognized as a Virginia Tech Exemplary Department in 2010. The award recognized our efforts for developing and sustaining innovative and effective approaches that foster international awareness and education.

In addition, our department continues to grow in just about every category. For example:

- our graduating class for 2011 was 106, one of the largest in at least 25

years

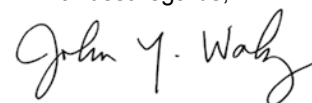
- the number of Ph.D. students in our department has increased every year for the past five years
- external research grants received by our faculty increased by more than 300 percent between 2005 and 2010.

Finally, we will continue to expand our faculty size, as we plan to open searches for at least two, and possibly three, new faculty starting in the fall of 2011.

As I've stated many times before, we owe much of our success to the great support that we continue to receive from our alumni. Whether it's directly, such as a gift or a donation, or indirectly, such as hiring our students or spreading the word about our program to potential students, our alumni continue to support us in innumerable ways.

I hope that you will continue to stay in touch with us. One way would be to complete the brief online survey form described at the end of the newsletter. And if you happen to be in the area, feel free to stop by.

With best regards,



John Y. Walz
Professor and Head

Department receives over \$8.6 million from the estate of Robert "Bobby" Hord

In the spring of 2011, the Department of Chemical Engineering received the largest single gift in its history. Robert 'Bobby' Hord, an alumnus of Virginia Tech's Department of Mechanical Engineering, had stipulated in his will that upon his death, his estate was to be divided equally between Virginia Tech's Departments of Chemical Engineering and Mechanical Engineering. Hord passed away in Richmond, Va., in December 2010 at the age of 90, and the total value of his gift to the University was more than \$17 million, the single largest bequest ever received by the University.



Hord

See Hord, page 7

FACULTY AND STAFF NEWS

Two receive awards



Two of our faculty were recognized over the past year by the College of Engineering Dean's Awards Program.

Professor **Padma Rajagopalan** was honored as one of the Outstanding New Assistant Professors in the college in 2010, while Professor **William Ducker** received an Excellence in Research Award in 2011.

Rajagopalan's research is focused on developing and constructing polymeric scaffolds to support cell growth for tissue engineering applications, while Ducker works in the colloids and interfaces area, including such topics as protein adsorption, colloidal stability, and lubrication in thin films.

Rajagopalan promoted

At the June 2011 meeting, the Virginia Tech Board of Visitors approved the promotion of Professor **Padma Rajagopalan** to associate professor with tenure.

Rajagopalan has had an extremely productive last two years; in addition to being named an Outstanding New Assistant Professor in the college, she has also been a principal or co-principal investigator on research awards totaling more than \$1.75 million.

Professor Rajagopalan was also one of three investigators on a \$1.12 million research grant from the National Science Foundation to understand the communication mechanisms between hepatocytes, the primary cell type in the liver, and liver sinusoidal endothelial cells. The other two researchers on the grant were Professors **T.M. Murali** (computer science) and **Rich Helm** (biochemistry). The grant was mentioned in a recent article in the news magazine *U.S. News & World Report*. See: <http://www.usnews.com/science/articles/2011/06/14/cells-talk-to-one-another-but-how> .



Professor **Chang Lu's** research on the use of spiral-shaped channels for increasing the efficiency for delivering DNA into cells via electroporation received a considerable amount of attention. The work was described in *Laboratory Equipment* magazine and the journals *Lab on a Chip*, *Nature*, and *Chemical Engineering Progress*, among others.

The rotation of the cells as they transport through the spiral-shaped microchannels exposes a much greater area of the cell to the electric fields used for electroporation compared to traditional straight channels. A description of the work can be found at <http://www.vtnews.vt.edu/articles/2010/07/071210-eng-genedelivery.html>.

Professor **Don Baird** gave invited talks on the topic

of simulating the flow of long fiber suspensions at Brown University and at the annual meeting of the Institute for Non-Newtonian Fluid Mechanics held in Gwynedd, UK.

Professor **Erdogan Kiran** had an active year in both teaching and research. In addition to developing and teaching a new graduate course in the polymers area for the fall 2010 semester, he was busy with a new industrially-sponsored research project on high-pressure polymer solutions and hosted two international researchers in his lab – Nunzia Falco, a doctoral student from Italy, and Juan Milanesio, a postdoctoral fellow from Argentina.

Kiran is currently serving on the scientific committee of the 10th International Symposium on Supercritical

Fluids that will be held in 2012.

Professor **John Walz** is serving as the chair of the American Chemical Soci-

ety Division of Colloid and Surface Chemistry for 2011. Professor **William Ducker** is vice chair of the division and will take over as chair in 2013.

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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Chemistry / chemical engineering Iron Chef competition



On Saturday, June 25, 2011, the Departments of Chemistry and Chemical Engineering staged the first-ever Faculty Iron Chef Competition at Professor Don Baird's house on Claytor Lake. Four members of each department worked for about four hours to prepare their best and most creative dishes using the secret ingredient – blueberries. A panel of three independent judges was selected to evaluate each dish on taste, presentation, and creative use of the secret ingredient. Iron chefs for the chemical engineering team were (pictured left to right) department electrical engineer Riley Chan, and professors Abby Whittington, Eva Marand, and Steve Martin. The event was a great success and loads of fun, even though the chemistry team wound up winning 'by a nose.'

STUDENT NEWS

 Kenneth J. Alexander	 Andrew P. Anderson	 Lauren K. Angleton	 Byron A. Bazemore	 Aaron L. Bertholf	 Alena J. Bortkiewicz	 Kevin M. Burnett	 Shelly L. Cabaniss	 Ryan A. Calvy	 Danielle M. Carey	 Nathan F. Chiappa	 Quintin P. W. Costin				
 Justin M. Card	 John P. Deis	<h1>Chemical Engineering</h1>								 Miles N. Dion Ngute	 Megan E. Douple				
 Sarah E. Dyer	 Andrew J. Golden	 Amanda C. Harris									 Aaron F. Holley	 Robert A. Jack II	 Christopher J. Jesuele		
 Daniel A. Kronick	 Corey T. Leggett	 Jonathon K. MacBride	 Bartholomew F. Marsh-Slavin	<h1>Class of 2010</h1>								 David M. Mattei	 Michael F. McKenna	 Jose M. Melgarejo	 Whitney N. Mitchell
 Stephen M. Morris	 Erica E. Neuman	 Nhan T. Nguyen	 Toan Q. Nguyen	 Elizabeth A. Petrs	 Renee A. Pinnock	 Christopher L. Ranque	 Mudib S. Rawoot	 Bailee J. Roach	 John R. Robisky	 Alana C. Sampson	 Christine M. Sargent				
 Brian D. Seal	 Jonathan A. Settell	 Hannah L. Sibole	 Eric L. Stomhill	 Robert T. Tauchen	 Kimberly E. Wade	 Joseph B. Walker	 Sean P. Walsh	 Andrew Z. White	 John M. White Jr.	<small>Stevens Photography, Inc. Christiansburg, VA</small>					

STUDENT NEWS

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

The department awarded 55 B.S. degrees during 2010 and 106 degrees in 2011. This sudden increase in enrollment is not a spike, as the graduating class for the next two years will remain large. Chemical engineering is clearly becoming a very popular major!

The department also awarded the following M.S. and Ph.D. degrees over the past year:

Dmitri Iarikov, M.S.

Novel Inorganic Membranes for Gas Separation

Advisor: Professor S. Ted Oyama

Nuttapol Lerkkasemsan, M.S.

Mechanistic Modeling of Biodiesel Production via Heterogeneous Catalysis

Advisor: Professor Luke Achenie

Raquel Mejia-Ariza, M.S. (MACRO Program)

Design, Synthesis, and Characterization of Magnetite Clusters using a Multi Inlet Vortex Mixer

Advisor: Professor Richey Davis

Yung-Chieh Su, M.S.

Selection of Prediction Methods for Thermophysical Properties for Process Modeling and Product Design of Bio-diesel Manufacturing

Advisor: Professor Y. A. Liu

John Brooks, Ph.D.

Model Chromia Surface Chemistry: C₂ Alkyl Fragment Reactions and Probe Molecule Interactions

Advisor: Professor David Cox

Jason Gaudet, Ph.D.

Gas-Phase Epoxidation of Ethylene and Propylene

Advisor: Professor S. Ted Oyama

Sangil Han, Ph.D.

Transport of Liquid Phase Organic Solutes in Liquid Crystalline Membranes

Advisor: Professor Stephen Martin

Yeonhee Kim, Ph.D.

The Design and Assembly of 3D Liver Mimetic Cellular Architectures

Advisor: Professor Padma Rajagopalan

Sam Hun Yun, Ph.D.

Fabrication of Ultrathin Palladium Composite Membranes by a New Technique and Their Application in the Ethanol Steam Reforming Reaction for Hydrogen Production

Advisors: Professors S. Ted Oyama and Luke Achenie

Chemical engineering student wins Goldwater scholarship

Ryan Shaw, currently a senior chemical engineering major from Roswell, Ga., received a Barry M. Goldwater Scholarship for the 2010-11 academic year.

The U.S. Congress established the Goldwater scholarships to provide a continuing source of highly qualified scientists, mathematicians, and engineers by awarding scholarships to college students who intend to pursue careers in these fields. Shaw was one of only 278

students nationwide, and five from the state of Georgia,

to receive the scholarship.



Undergraduate student Ryan Shaw, left, receives a certificate acknowledging his recognition as a Goldwater Scholar from Department Head John Walz.

Goldwater Scholars have very impressive academic qualifications that have garnered the attention of prestigious post-graduate fellowship programs. Recent Goldwater Scholars have been awarded 73 Rhodes Scholarships, 105 Marshall Awards, 90 Churchill Scholarships (nine of the 14 awarded in the United States in 2010), and numerous other distinguished fellowships.

Shurer receives Othmer Award

Carolyn R. Shurer, a junior chemical engineering student from Clearfield, Pa., was the recipient of the 2009-2010 Donald F. Othmer Sophomore Academic Excellence Award, which is presented by the American Institute of Chemical Engineers. The Othmer Award recognizes the sophomore student who has maintained the highest scholastic standing of any member of the AIChE Student Chapter.

In addition to her outstanding classroom

See Shurer, page 5

The VIRGINIA TECH DEPARTMENT of CHEMICAL ENGINEERING
CONNECTION

Shurer - from page 4

performance, Shurer has also completed a co-operative education experience at Dupont.

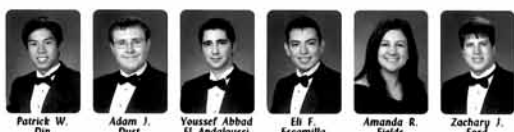
The award consists of a certificate and a complimentary copy of Perry's *Chemical Engineers' Handbook*.



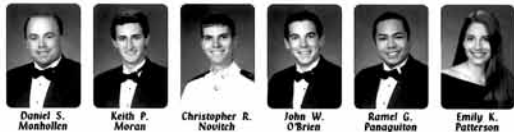
Department Head John Walz presents the Donald F. Othmer Award to Carolyn Shurer.



Chemical Engineering



Class of 2011



Stevens Photography, Inc. Christiansburg, VA

STUDENT NEWS

Summer Unit Operations Laboratory in Denmark

Taking the summer Unit Operations Laboratory course at the Technical University of Denmark continues to be a popular option for the chemical engineering students. In 2010, 27 students chose to go to Denmark, while in 2011, a record 36 students participated. Scholarships for the students were provided by generous donations from Novozymes and from alumnus Kelly (Drum) Belz (B.S. 1995).



At left, Virginia Tech chemical engineering students Katelyn Gause, left, and Lindsey Jewett visit a power plant near Copenhagen.

At right, Virginia Tech chemical engineering students pose at a soccer game in Denmark.



DEPARTMENT NEWS



Department Head John Walz (center) with (l to r) CIDER Director Peter Doolittle, President Charles Steger, Senior Vice President and Provost Mark McNamee, and Vice President and Dean of Undergraduate Education Daniel Wubah.

Department named 2010 Exemplary Department

The Department of Chemical Engineering was one of three departments across Virginia Tech named as a 2010 University Exemplary Department.

Established in 1994, the Exemplary Department Award program recognizes the work of departments and/or programs that maintain exemplary teaching and learning environments for students and faculty. The program has a specific theme each year, and for 2010 the program focused on departments that developed and sustained innovative and effective approaches

that fostered international awareness and education. (The other two departments receiving the award in 2010 were mechanical engineering and entomology.)

In preparing the application package, Department Head John Walz emphasized the ongoing success of the Department's Unit Operations Laboratory program in Denmark and the extensive international collaborations by the faculty in research, especially those of Professor Y.A. Liu with companies in China and Taiwan.

The department received a plaque and a \$10,000 gift.



Chemical Engineering faculty and staff gather at the 2010 University Exemplary Department Awards Ceremony. Standing to the far right is Engineering Dean Richard Benson.

Hord - from page 1

In each of the two departments, the funds will be equally divided into two endowed accounts, each over \$4.3 million in value. One account will be used to support undergraduate scholarships or graduate fellowships and the other to support faculty chairs, professorships, or fellowships.

These funds will have an enormous impact on the operation of our department, as they will give us the ability to attract outstanding students and faculty to our program. In fact, we have already seen some of the benefits, as we used a portion of the funds to provide additional stipends to our top graduate student recruits for the fall 2011 incoming class.

Hord enrolled at what was then Virginia Polytechnic Institute in 1941, but soon left to serve in World War II. After his return to Blacksburg, he was able to graduate with a bachelor's degree in mechanical engineering in 1949. He earned a master's in power and fuel engineering a year later before entering the railroad industry. Hord spent much of his professional career with the railroads, working for Norfolk & Western; Norfolk, Franklin & Danville; and Rail World Inc. Upon retirement, he focused his attention on his other passion – investing.



Drawing of the Signature Engineering Building – the future home of the department.

Construction to start on department's future home: The Signature Engineering Building

During the summer of 2011, construction will begin on the future home of the Department of Chemical Engineering – the Signature Engineering Building. This four-story, nearly 160,000 square foot building will provide office space and state-of-the-art classroom and laboratory space for faculty in the chemical engineering, mechanical engineering, aerospace and ocean engineering, and engineering education departments. All faculty and staff offices and research laboratories in the Department of Chemical Engineering will relocate to this building upon its completion with the exception of the machine shop and the unit operations (UO) laboratory. (The UO will remain in Hancock Hall.)

The Signature Engineering Building will be located near the intersection of Stanger Street and Prices Fork Road. Construction is expected to take approximately 24 months

DEPARTMENT NEWS

Senior design students hold expo and outreach for Governor's school

On May 11, 2011, the 106 seniors of Professor Y.A. Liu's senior design class held an expo and outreach event for 40-plus teachers and students from the Governor's School of Southside Virginia. The event, which was held in Torgersen Hall on campus, was supported by a grant from Novozymes Biologicals.

The event showcased the posters from the best solutions of this year's 13 senior design projects, which were provided by Novozymes Biologicals; Milliken Chemical; Alliant Techsystems (ATK); Honeywell Specialty Materials; Mid-Atlantic Technology, Research and Innovation Center; and the American Institute of Chemical Engineers. The projects covered a wide range of topics, such as natural gas-to-liquid fuels, energy and water savings, biodiesel from animal fat, carbon dioxide capture

from power plant flue gas, landfill gas to energy conversion, and specialty chemical manufacturing.

The event also honored Paul Luna (1957-2011), former process and technology manager for Novozymes Biologicals, for his strong support of Novozymes projects for chemical engineering seniors at Virginia Tech and for his commitment to community service. Paul's widow, Barbara Luna, along with several family members, attended the event. Also attending were Dr. Mark McNamee, senior vice president and provost at Virginia Tech, and several engineers and managers from ATK and Novozymes Biologicals.

Scott Vice, process engineering manager of ATK, presented award checks to the seniors who submitted the top solutions to his company's projects.



Students, faculty, and staff enjoy the 2011 Graduate Student Symposium banquet.

Graduate Student Symposium

The annual graduate student symposium, organized by our department's Chemical Engineering Graduate Student Association (ChEGSA), continues to be a great success and one of the highlights of our graduate program. The one-day event, which is completely organized and run by our graduate students, consists of student talks, a keynote lecture, an afternoon poster session, and an evening banquet for students, faculty, and staff. For 2010 and 2011, the keynote speakers were:

2010: Professor Peter Pintauro, Vanderbilt University: *New Membrane Morphologies for Improved Fuel Cell Operation*

2011: Professor Orlin Velez, North Carolina State University: *Electrically Functional Soft Matter: From Precise Colloidal Assembly to Hydrogel Photovoltaics*



Graduate student Heather Grandelli (l) and Professor Erdogan Kiran at the Graduate Student Symposium poster session.



Department Head John Walz (far left) and Professor Y.A. Liu (far right) pose with family members of Paul Luna.

The Doumas Distinguished Lecture

Thanks to a generous donation by alumnus Dr. Basil 'Bill' Doumas (B.S. 1954, M.S. 1955, Ph.D. 1961, all in ChE) and his wife Ann, our department established the annual Bill and Ann Doumas/Dow Chemical Company Distinguished Lecture program.

The inaugural speaker was Professor Jefferson Tester, the David Croll Professor of Sustainable Energy in the School of Chemical and Biomolecular Engineering at Cornell University. Professor Tester's seminar was held on Dec. 1, 2010 and was entitled "Can Geothermal Become a Major Supplier of Primary Energy in the United States?"

Doumas remains a very active member of our Department's Advisory Board.

ALUMNI NEWS

Alumnus Mike Kender continues to support both of his passions – engineering and business

After more than two decades of working on Wall Street, Mike Kender (B.S. ChE 1983) has returned to Virginia Tech, this time as a teacher in the Pamplin College of Business.

Originally from Pittsburgh, Pa., Kender spent two years at Allied Chemical near Richmond, Va., before leaving to earn an MBA from U.Va.

In grad school, he became interested in investment banking and joined Thomson McKinnon in New York after receiving his degree. Five years later, he moved to a high-yield debt research group with Smith Barney, where he spent 13 years. In 2005, he moved into a loan trading company position with Citigroup (formerly Smith Barney).

In 2008, at the “old” age of 47, Kender had had enough of the pressure and 70+-hour work weeks of Wall Street and decided to retire so that he could spend more time with his family. He had maintained close ties to Virginia Tech throughout his career, and after speaking to several professors in finance during

a reunion trip, he decided to give teaching a try. He joined Pamplin as a part-time adjunct professor in 2009, becoming a full-time associate professor-of-practice a year later.

In addition to teaching classes on such topics as Asset Valuation, Fixed Income Securities, and Mergers and Acquisitions, Kender also advises student investing groups, participates in field trips to New York, and helps organize numerous “Hokies on Wall Street” gatherings.

Still, Kender has not forgotten that he is an engineer, and remains heavily involved with both our department and the College of Engineering. He is currently the chair of our department’s Advisory Board and is a member of both the Dean’s Advisory Board and the College of Engineering’s Committee of 100. In addition, he has provided funds to establish the Mike and Lisa Kender undergraduate scholarship and the Mike and Lisa Kender graduate fellowship.



Mike Kender (B.S. ChE 1983) teaches a class in the Pamplin College of Business.



Classes of 1964, 1965, and 1966 visit campus

Members of the graduating classes of 1964, 1965, and 1966 traditionally come back to campus every five years. During their most recent visit, Department Head John Walz presented a talk on how things had changed in the department and in chemical engineering in general since their graduation. In addition to dinners at Preston’s in the Virginia Tech Inn and the Farmhouse Restaurant, the group enjoyed a hike to the Cascades.

Front row, left to right, are: Dorothy Herring, Peggy Crabtree, Joan Piercy, Vera Love, and Linda Johnson. Back row, left to right, are alums: Burl Lawson, Mike Herring, Fred Crabtree, Sam Piercy, John Atkins, Dick Love, Craig Johnson, Bob Teter, and Doug Maynor.

ALUMNI NEWS

ChE Alumnus Dr. Kirk Schulz receives Graduate Alumni Achievement Award

Chemical engineering alumnus Dr. Kirk H. Schulz, president of Kansas State University, received the 2011 Virginia Tech Graduate Alumni Achievement Award.

The Graduate Alumni Achievement Award was established by the Graduate School and the Virginia Tech Alumni Association in 2003 and is awarded annually to recognize the outstanding national and/or international achievement and exemplary contribution to profession, discipline, community, or society of a graduate alumnus.

Schulz received both his B.S. degree in 1986 and his Ph.D. in 1991 in chemical en-



Kansas State University President Dr. Kirk Schulz, in the center of the front row wearing a dark jacket, poses with members of the chemical engineering department and other guests at a reception held in honor of his receiving the 2011 Virginia Tech Graduate Alumni Achievement Award.

gineering from Virginia Tech (his Ph.D. advisor was Professor Dave Cox).

Shortly after his arrival at Kansas State in 2009, Schulz initiated the K-State 2025

visionary planning initiative which seeks to place Kansas State University among the top 50 public research universities in the next 15 years.

Prior to his appointment at

Kansas State, Schulz was vice president for research and economic development at Mississippi State University. He also served on the faculty at Michigan Technological University and the University of North Dakota.

Born in Portsmouth, Va., Schulz grew up in Norfolk and attended Old Dominion University before transferring to Virginia Tech.

He is active in the Boy Scouts of America and serves on the executive board of the

Coronado Council. He also serves in various roles on the boards of Cereal Food Processors, the Greater Manhattan Community Foundation, the Kansas Bioscience Authority, the Big 12 Athletic Conference, and the Accreditation Board for Engineering and Technology.

He is active in several professional societies including the American Institute for Chemical Engineers and the American Society for Engineering Education.

In recognition of achievements in the field of chemical engineering, Schulz was selected as a Fellow of both the American Society of Engineering Education and the American Association for the Advancement of Science.

Schulz was recognized with the Virginia Tech College of Engineering Outstanding Young Alumnus Award in 2000.



Walz hosts Houston area alumni

On October 16, 2010, Department Head John Walz hosted a reunion event for all chemical engineering alumni living in the Houston, Texas area. The event was held at the Fox and Hound Smokehouse/Tavern during the Virginia Tech vs. Wake Forest football game (a 52-21 victory for Tech). More than 20 alumni from the area, along with their families, attended the event. Walz (far right) poses with Houston-area chemical engineering alumni.

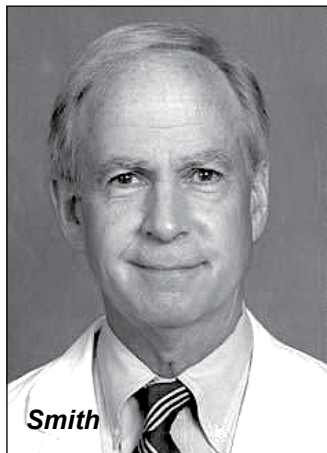
ALUMNI NEWS

ChE Alumnus Dr. Sid Smith receives Alumni Distinguished Service Award

Chemical Engineering Alumnus and University of North Carolina Professor of Medicine Sidney C. Smith Jr. (B.S. ChE 1963) was a recipient of Virginia Tech's Alumni Distinguished Service Award for 2011.

Established in 1973, the award recognizes individuals for their contributions to the university.

Smith, of Chapel Hill, N.C., is a professor of medicine at the University of North Carolina and has broad interests in the treatment and prevention of car-



diovascular disease. He is president of the World Heart Federation and has been involved with the American Heart Association for the past three decades, serving as president from 1995 to 1996 and chief science officer from 2001 to 2003.

After receiving his chemical engineering degree, Smith earned a medical degree from Yale University in 1967 and completed his medical residency and cardiology fellowship at the Harvard Medical School-affiliated Peter Bent Brigham (now Brigham and Women's) Hospital.

He has maintained a strong commitment to Virginia Tech, and currently serves on the board of directors at the Virginia Tech Carilion School of Medicine. Over the years, Smith has also served on the board of directors of the Virginia Tech Alumni Association, the Biological Systems Engineering Advisory

Board, and the Chemical Engineering Advisory Board.

He is co-chair of the Raleigh/Durham Regional Campaign Committee within The Campaign for Virginia Tech: Invent the Future, is a member of the Campaign Steering Committee for the College of Engineering, and is on the Engineering Committee of 100.

Smith was the 1996 recipient of Virginia Tech's University Distinguished Achievement Award, in recognition of his many achievements in the medical field that have benefitted society.

He was inducted into Virginia Tech's Academy of Engineering Excellence in 2004.

Dounis elected PFA president

Dr. Dimitri Dounis, corporate director of marketing and foam research at Hickory Spring Manufacturing Company of Hickory Springs, N.C., was elected to serve as president of the Polyurethane Foam Association (PFA), the trade association of the U.S. flexible polyurethane foam manufacturers and suppliers. His term began Jan. 1, 2011.

Dounis earned his Ph.D. in chemical engineering from Virginia Tech in 1995 under the guidance of University Distinguished Professor Emeritus Garth Wilkes.

Lohr Named President and Executive Director of CCAM

David Lohr (B.S. ChE 1976) was named president and executive director of the Commonwealth Center for Advanced Manufacturing (CCAM), a research center being developed on the site of Rolls-Royce's new manufacturing campus in Prince George County, Va. CCAM is being developed as a partnership among state universities, Rolls-Royce, and other businesses. The 50,000-square-foot center will function as a research and educational site focused on advanced manufacturing technologies.

Lohr is past director of the Virginia Biosciences Development Center and past chairman of the



National Business Incubation Association. He is a current member of the Advisory Boards of both the Department of Chemical Engineering and the College of Engineering, and a member of the Engineering Committee of 100.

CLASS NOTES

The information below was taken from the mail-in response cards that the department received during the past year, or through the on-line alumni feedback form. The on-line form can be accessed via the ChE Alumni tab on the right-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.

1942

Morris Barnett Minkin

After graduation in 1942, Morris reports that he took a job in a distillery. He worked there for about two years when he decided to join the army. After his stint in the army, he had a number of jobs before starting to work at American Cyanamid. Morris stayed there for about 22 years until his wife convinced him to retire. He says he was bored doing nothing at home, so decided to go back to work and eventually retired again at 80 years of age to help his wife's caretaker.

He and his wife have two daughters. His oldest daughter graduated from Yale Medical with an OB/GYN medical degree and his youngest daughter is a soprano and teaches music as well as performs in concerts. He has five grandchildren.

1950

Michael Philip Mauzy

Other degree: M.S. in ChE, 1951 from the University of Tennessee

Michael reports that he is retired from Roy F. Weston, Inc. and currently resides in Columbia, Mo.

1955

Robert S. Luttrell

Other degrees: M.S. in ChE, 1956; AMP-Harvard.

Robert can be reached at rluttrl@comcast.net.

1958

James Richard Ballengee

Jim retired in 1999 as the executive vice president and CFO of W.C. Bradley Co. He and his wife Betty May Rose have been married over 53 years and have four children and seven grandchildren. Jim was a member of our first departmental advisory board until his retirement. He resides in Columbus, Ga., and can be reached at bballengee@aol.com.

1964

Robert Gray O'Connor

Robert can be reached at bobcat@arkansas.net.

1967

Robert B. Fish, Jr.

Robert retired from DuPont in 2006, and reports that he recently received the Bolton/Carothers Innovative Science Award from The DuPont Company in recognition of work developing new polymers.

1971

William E. Poorbaugh

Bill is retired from Phillip Morris USA. He was the director of process engineering and is a founding member of the Committee of 100 of IAC for OMEP (now CEED). He can be reached at billpoorbaugh@aol.com.

Charles R. Thompson

Other degree: M.S., en-

vironmental science, 1978, Virginia Tech

Charles can be reached at charles_thompson4@cox.net.

1976

William (Bill) Wray

Bill works as an engineering consultant for Bayer MaterialScience and was recently presented with a Science and Technology Award by his employer for his role in development of a novel process to produce a sorbitol based polyether. This is his third award in his ten years of service with Bayer MaterialScience. Bill resides in Kingwood, Texas and can be reached at wdwray@hotmail.com.

1979

John S. Kent III

John reports that he works for KBR and can be reached at jsk3htc@aol.com. He currently lives in Birmingham, Ala.

1980

David R. Fitchett

David reports that he plans to retire soon and can be reached at dnsfitchett@yahoo.com. He currently resides in Mineral Wells, W.Va.

Timothy A. Wolk

Timothy is a senior territory sales manager for Mine Safety Appliances (MSA) where he has been employed for more than six years. Timothy reminisced about his best/worst memory of Virginia Tech's

ChE Department in his recent correspondence. Tim reports, "Dr. Mischke's Summer Unit Operations Lab was truly the Chemical Engineer's Boot Camp. Mischke was very tough, but looking back — he prepared us very well for the real world and the learning experience I gained with that course was extremely valuable for my career!" Timothy can be reached at timwolk@comcast.net.

1985

Kevin Knoernschild

Other degree: M.S., engineering management from Old Dominion University.

Kevin is currently a manager of engineering at Jacobs Engineering Group, Inc. and resides in Fuquay Varina, N.C. He can be reached at kjknoernschild@nc.rr.com.

1991

Caroline McLean Holtzman

Other degree: M.S., systems engineering, 1997

Caroline is an engineering instructor at John Tyler Community College.

1994

William K. Barkoskie

Other degree: MBA, University of South Carolina, 2004

Bill reports that he currently works as a manager with North America Supply Chain, Arizona Chemical. He and his wife have welcomed their second child to the family, Caro-

See Class Notes, page 13

CLASS NOTES

line, in April 2010. Bill can be reached at thebarkoskies@yahoo.com.

2001

Richard Oldland

Other degree: MBA, The University of Texas at Austin, 2011

2002

Sarah Sarver Daggett

Sarah is currently a research engineer at MIT. She and her husband Matt (EE, 2001), welcomed their first child, Sarver Matthew, in December 2009. Sara can be reached at sarahdaggett@vt.edu

Alicia Conrad Owsiak

Alicia is currently deputy technology division chief for the US Marine Corps, Joint Non-Lethal Weapons Directorate.

2003

Sam Ellis

Sam can be reached at samfellis@gmail.com

2006

Jennifer Uebelhoer

Jennifer is a coating engineering with DuPont Teijin Films.

2008

Jesse Kelly

Jesse is currently pursuing his doctorate degree in chemical engineering at Clemson University.

Donors to the Department

The department gratefully acknowledges the following individuals, corporations, foundations and trusts for their support during 2010.

INDIVIDUALS

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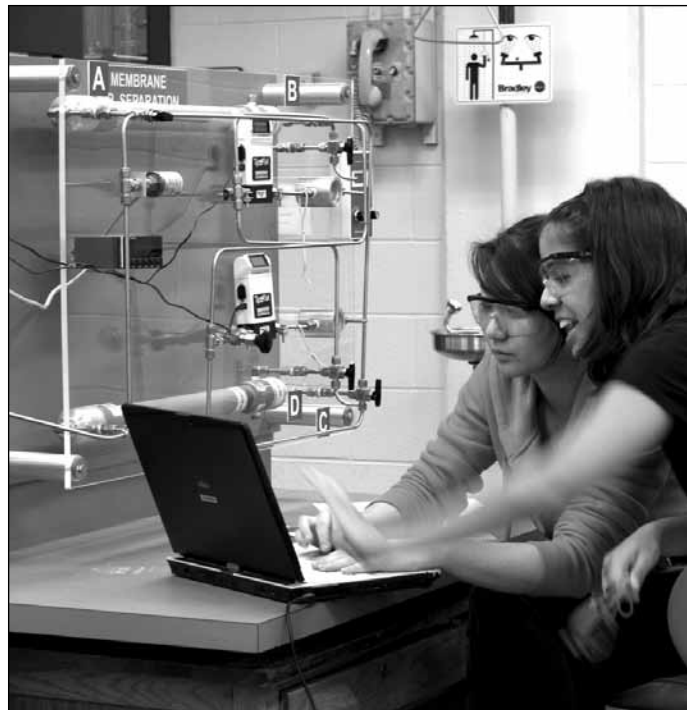
Summer Unit Operations Lab: The Chemical Engineering ‘Boot Camp’

The summer unit operations laboratory continues to be one of the hallmarks of our undergraduate program. Commonly described by some alumni as the chemical engineering ‘boot camp,’ the five-week course provides

students with a comprehensive and rigorous introduction to a range of common unit operations encountered in industry.

Using funds from the recently-implemented Engineering Fee, we have

made a number of significant additions to the lab, including experiments in continuous distillation, liquid-liquid extraction, membrane separations, and packed bed absorption, with more additions planned for the upcoming year.



At left: Students with the packed bed absorber. Above: Students performing an experiment with the membrane separations unit.

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 series 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.

CONNECTION

Online Alumni Information System

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

The easiest way is to use our online alumni update system, 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 infor-

mation. 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 it 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.

WE'D LIKE TO HEAR FROM YOU!

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:

- Feel free to make all information provide on this form public.
 Feel free to publish my name, year of graduation, and contact information only (the additional information about yourself or career will be kept confidential).
 Feel free to publish my name, year of graduation, and the additional information about myself (your contact information will be kept confidential).
 Do not publish any information about me.
 Other, please explain on a separate sheet of paper.

Please mail the completed form to:
Chemical Engineering Department
c/o Ms. Jane Price
133 Randolph Hall
Blacksburg, VA 24061

or, by e-mail at: jsprice@vt.edu

Department of Chemical Engineering
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