

CONNECTION

SUMMER 2012

Greetings from the Department Head

Faculty, students, and alumni receive recognition

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

Greetings once again from Blacksburg. I hope all of you had a wonderful summer and managed to stay somewhat cool. It even topped 100 degrees several times here!

The past 12 months have been another busy and productive period for the department, which I have tried to summarize in this edition of *Connection*. As you will read, our faculty, staff, students, and alumni continue to be recognized for their success, both from the university and from national organizations as well.

As examples, Y.A. Liu, who is well known to many of you and who has taught our senior-level capstone design courses for 30 years, was named an Alumni Distinguished Professor in the College of Engineering, Ryan Shaw was named the outstanding senior in the College of Engineering for 2012, and alumnus Joe Collie (B.S. ChE 1950) received the 2011 College of Engineering Service Award.

I am also pleased to report on two ongoing projects that will have substantial

impacts on the quality of our physical facilities. First, construction on the Signature Engineering Building is well underway and the department should be moving into this state-of-the-art building in early 2014. Second, significant renovations have been completed on the department's unit operations laboratory located in Hancock Hall. Each of these is described in greater detail within the newsletter.

Finally, it is with very mixed emotions that I inform you that this will be my last

newsletter as head of the department, as I recently accepted an offer to become Dean of the College of Engineering at the University of Kentucky. While I am excited about this new opportunity, I will miss all of the great friends that I have made while at Virginia Tech. Thanks in large part to the tremendous support that the department continues to receive from its alumni, a number of positive and significant things have happened to our program over the past seven years, and it is clear that the depart-



Walz

ment is on a very positive trajectory. I certainly hope that you will continue to provide similar support to the next head of this great department.

With best regards,



Professor and Head

Construction underway on future home of chemical engineering

As can be seen in this photo, construction is well underway on the Signature Engineering Building, which will be the new home for all offices and research laboratories for the chemical engineering department.

The machine shop will remain in Randolph and the unit operations laboratory will remain in Hancock. The current target date for completion of the building is the end of 2013, with move-in planned for early 2014.

The Signature Engineering Building in June 2012.



DEPARTMENT NEWS

Unit Operations Laboratory continues to undergo renovation

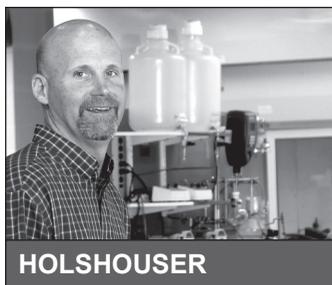
The department's unit operations laboratory, located in Hancock Hall (adjacent to Randolph) continues to undergo significant renovation. In addition to adding new experiments and lab furniture, the lab has been painted and many of the utility lines have been upgraded.



Students work in the newly-renovated unit operations lab during the first summer session of 2012.

Holshouser joins department

We are pleased to welcome **Kevin Holshouser** to the department as a lab technician/machinist. Previously, Holshouser worked in building/facilities maintenance. He has already played a key role in helping to renovate the department's unit operations laboratory.



Koros presents Doulmas Distinguished Lecture

The 2011 Bill and Ann Doulmas/Dow Chemical Company Distinguished Lecture was presented by Professor **William J. Koros**, the Roberto C. Goizueta Chair and Georgia Research Alliance Eminent Scholar in Membranes at the Georgia Institute of Technology.

Koros, a former member of the department's advisory board, spoke on "Evolutionary Steps Toward a Revolution in Separation and Purification Processes."

The Doulmas lecture-ship was made possible by a generous donation by alumnus Basil 'Bill' Doulmas (B.S. 1954, M.S. 1955, Ph.D. 1961, all in ChE) and his wife Ann.



Ford joins advisory board

Roseanne Ford, Cavaliers' Distinguished Teaching Professor and Chair of the Department of Chemical Engineering at the University of Virginia, joined the ChE Advisory Board in the fall of 2011.

Ford earned her B.S. from the University of Delaware and her M.S. and Ph.D. from the University of Pennsylvania, all in chemical engineering. She is a Fellow of the American Institute of Medical and Biological Engineering, and has won both the Thomas E. Hutchinson Faculty Award for excellence in teaching and the University of Virginia President and Visitors' Prize for Scientific



Research.

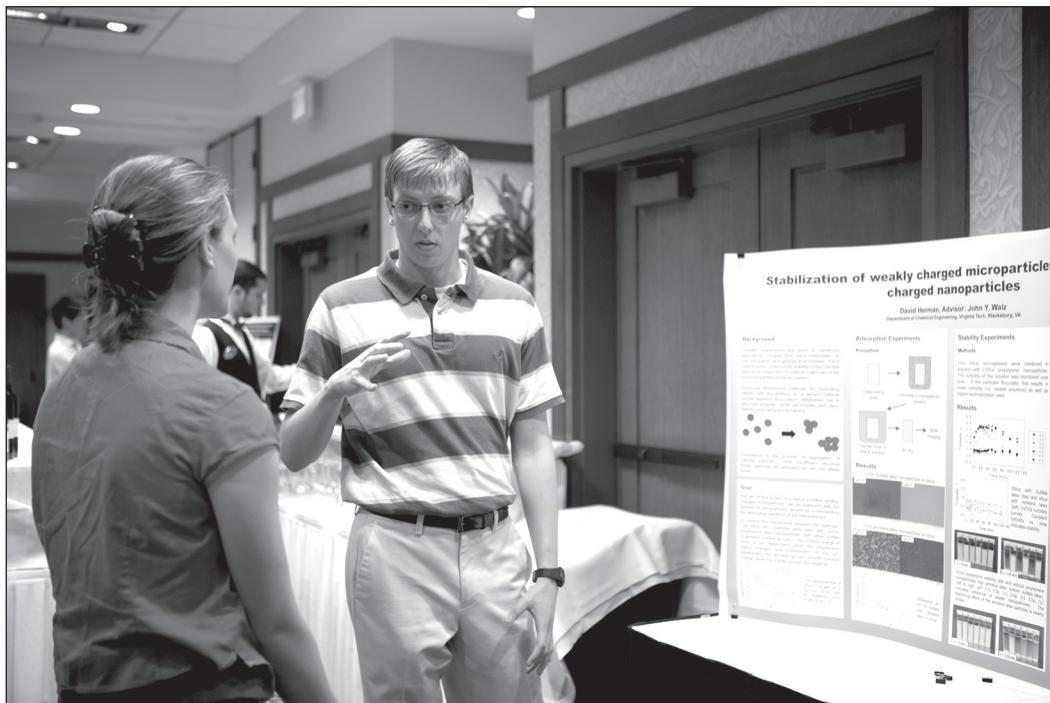
Ford replaces Professor Bob Davis on the board, who was the previous chair of chemical engineering at U.Va.

DEPARTMENT NEWS

ChEGSA Graduate Student Symposium held

The graduate students of the department hosted another successful Graduate Student Symposium on April 12, 2012. The one-day event consisted of oral presentations during the day, a poster session/reception in the afternoon, and a banquet in the evening.

Overseeing the organization of the symposium this year was graduate student Francisco Guzman. One of the highlights of this year's symposium was the plenary talk by Professor Scott Guelcher of the Department of Chemical and Biomolecular Engineering at Vanderbilt University. Guelcher received his B.S. degree in chemical engineering from Virginia Tech in 1992 and his M.S. and Ph.D. degrees from the University of Pittsburgh and



Graduate student David Herman discusses his work at the afternoon poster session.

Carnegie Mellon University, respectively. His talk was

entitled "Injectable Polymeric Dual-Purpose Bone Grafts for

Treatment of Contaminated Open Fractures."



Professor Scott Guelcher delivers his plenary lecture.

Virginia Tech Chemical Engineering Department **CONNECTION**

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

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FACULTY AND STAFF NEWS

Liu named Alumni Distinguished Professor

Y.A. Liu, Frank C. Vilbrandt Endowed Professor of Chemical Engineering, has been named an Alumni Distinguished Professor by the Virginia Tech Board of Visitors for his commitment to his students and colleagues as an advisor, counselor, and friend. The Alumni Distinguished Professorship is a pre-eminent appointment recognizing faculty who have made outstanding contributions to the instructional program of the university, and in so doing, have touched the lives of generations of Virginia Tech alumni.

During his 30-year academic career at Virginia Tech, Liu has achieved international recognition for his promotion of sustainable development and environmental stewardship. He and his

graduate students have made significant contributions in the areas of energy and water savings, and design and optimization of polymer, biodiesel, and petroleum refining operations. Together with his students, Liu has published nine books and some 120 research papers.

Since the 1980s, Liu has worked in industrial outreach during his university breaks, promoting sustainable development in Virginia industries and developing countries. He has worked closely with both international and American-based corporations, including SINOPEC, Formosa Plastics Group, and Honeywell Specialty Materials.

It is this unique partnership with industry from around the world that allows Liu's students to apply design skills to

projects that represent actual problems faced by engineers. This approach provides students in his senior-level capstone design courses with first-hand experience of the challenges associated with "real world" design.

This experience is a major strength of Virginia Tech's chemical engineering design education. Liu has received stellar teaching evaluations, and engineering students have twice honored him with the Sporn Award for excellence in engineering teaching. Additionally, he has inspired his students to win top awards in the Chemical Engineering National Design Competitions eight times.



LIU

Rajagopalan named Hord faculty fellow

Associate Professor **Padma Rajagopalan** has been awarded the Robert H. Hord Jr. Chemical Engineering Fellowship. The Robert H. Hord Jr. Chemical Engineering Fellowship was established by a gift from

the late Robert H. Hord, Jr., a 1950 graduate of the College of Engineering who was an enthusiastic supporter of Virginia Tech's chemical and mechanical engineering programs. The fellowship acknowledges and rewards

faculty in the Department of Chemical Engineering who have shown exceptional merit in research, teaching and/or service.

Rajagopalan, who joined the Virginia Tech faculty in 2007, is an emerging leader

in the field of liver tissue engineering. She has pioneered unique engineered tissue mimics that dramatically improve our ability to maintain stable and functional cultures of liver cells outside the body. She has developed the first 3D liver mimic that can recapitulate several critical aspects of liver architecture that are found within the body.

Rajagopalan has a strong record of obtaining funding for her research. She has been awarded eight grants totaling more than \$3.5 million from multiple agencies, including the prestigious NSF Faculty Early Career Development Award. Last year, the U.S. Environmental Protection Agency awarded her a three-year \$750,000

See Hord, page 7



Professor Padma Rajagopalan (far right) with her graduate students and participants in her 2012 summer camp for female high school students.

FACULTY AND STAFF NEWS

Two ChE faculty recognized at awards ceremony

Chemical engineering faculty members **Steve Martin** and **Chang Lu** received awards during the 2012 College of Engineering Awards Ceremony.

Assistant Professor Steve Martin received a Dean's Award for Excellence in Teaching. Over the last five years, he has devoted a significant amount of his time to improving the laboratory experience for students taking the department's required Unit Operations Lab. He has created a new, comprehensive laboratory handbook that replaced a variety of legacy documents and included guidelines for safety, report writing, and oral pre-

sentations. Recently, Martin worked with four undergraduate students on improving specific experiments in the

lab, and has worked with an additional 20 undergraduates on research projects.

Associate Professor Chang

Lu was named a College of Engineering Faculty Fellow, which provides \$5,000 annually for three years to be used in support of his research. Lu has made significant contributions to the practice of gene delivery and cellular analysis. In particular, his group has demonstrated that a new electroporation technique can permeate the entire cell membrane for gene delivery.

He and his coworkers have also shown how to significantly improve the efficiency of electroporation by harnessing the hydrodynamic effects that uniquely occur when fluids flow along curved paths.



Professors Steve Martin (l) and Chang Lu (r) pose with Department Head John Walz at the 2012 College of Engineering Awards Ceremony.

Research from Lu's group featured on journal cover

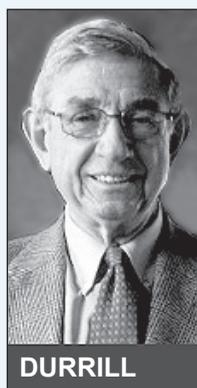
The research work by **Professor Chang Lu** and coworkers was featured on the cover of issue 8 of *Lab*

on a Chip, the premier journal in the field of microfluidics and miniaturization. The paper, entitled "Quantitative

measurement of quantum dot uptake at the cell population level using microfluidic evanescent-wave-based flow cytometry," describes the use of a novel microfluidic cytometric tool developed in Lu's lab to examine the delivery of fluorescent nanoparticles into cells at the single cell level.



Durrill wins Sporn award



DURRILL

For the second time in six years, the students of Virginia Tech's College of Engineering have selected **Professor Preston Durrill** to receive the Sporn Award for Excellence in Engineering Education. Nominations for the Sporn award are solicited from all engineering students, making the award highly competitive. Durrill retired from Radford University in 2002, where he had taught chemistry for 37 years, and joined the chemical engineering department at Virginia Tech in 2004 as an adjunct professor. In addition

to teaching general chemistry courses, he annually teaches both the introductory Mass and Energy Balances courses and one session of the summer unit operations lab.

Marand wins award

Professor Eva Marand has been awarded a Fulbright U.S. Scholar Award that will provide support to her to spend the spring 2013 semester at the Institute of Macromolecular Chemistry in Prague, Czech Republic.

Professor Marand and

her colleagues at the institute aim to chemically modify the surface of carbon nanotubes with specific charged molecules that could then be used to control water and ion transport through membranes composed of these nanotubes.

FACULTY AND STAFF NEWS

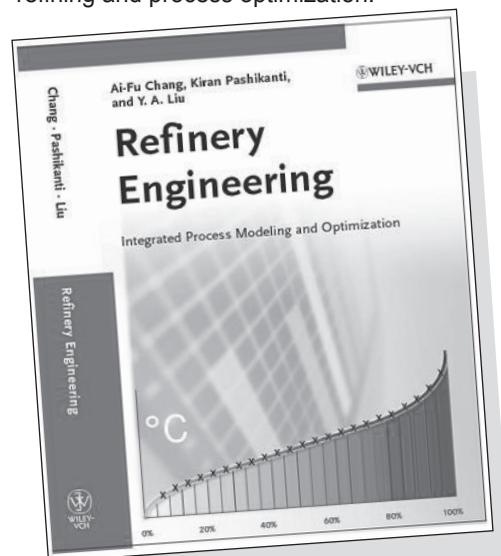
Kiran named editor of book series

Erdogan Kiran was named the Editor of the Elsevier Book Series on Supercritical Fluid Science and Technology (Kiran is also currently editor-in-chief of the *Journal of Supercritical Fluids*). He was the invited Plenary Lecturer at the 13th European Meeting on Supercritical Fluids held in October 2011 at The Hague in the Netherlands and also gave an invited talk at Tufts University. He organized and co-chaired the session on Pharmaceutical and Biomedical Applications of Supercritical Fluids at the AIChE Annual Meeting in Minneapolis, and served on the organizing committee of the 10th International Symposium on Supercritical Fluids (ISSF) held in May 2012 in San Francisco.

Liu publishes major textbook

Professor Y.A. Liu and his Ph.D. students Ai-Fu Chang and Kiran Pashikanti, both September 2011 graduates of the department, published a 522-page textbook, Refinery Engineering: Integrated Process Modeling and Optimization, Wiley-VCH, Weinheim, Germany (2012). The book is a comprehensive guide to predictive modeling of integrated refinery reaction and fractionation systems for process optimization and production planning. It is the fifth pioneering textbook that Professor Liu's doctoral students have written with him based on their dissertation work, which is a truly unique and significant achievement. The textbook received excellent reviews and strong endorsements by top industrial practitioners and academic experts in petroleum

refining and process optimization.



Professor Don Baird had an extremely productive year in research. He gave an invited lecture at the International Congress of Rheology in Lisbon, Portugal, completed the second edition of his textbook Polymer Processing: Principles and Design, and graduated four Ph.D. students from his group. In addition, Baird's Ph.D. student Gregario Velez-Garcia accepted a faculty position in the Department of Chemical Engineering at the University of Massachusetts at Lowell.

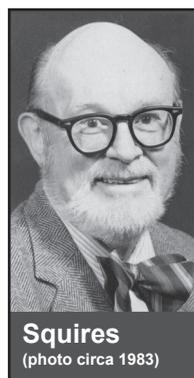
Professor Emeritus Garth Wilkes remains busy teaching short courses around the country. Since October 2011, Wilkes has taught eight short courses at academic and industrial locations on a variety of topics related to polymers.

In Memoriam: Dr. Arthur M. Squires

The Department was saddened to learn that University Distinguished Professor Emeritus **Arthur M. Squires** passed away May 18, 2012 at the age of 96. A distinguished member of the chemical engineering profession, Squires was a member of the National Academy of Engineering and a Fellow of the American Academy of Arts and Sciences. He was a recipient of the Henry Storch Award of the American Chemical Society in 1973, recognizing his contributions to fuel chemistry and engineering.

Educated at the University of Missouri (A.B. 1938) and Cornell University (Ph.D. 1947), Squires started his career at the M.W. Kellogg Company in 1942, participating in the design and startup of the gaseous diffusion plant at Oak Ridge National Laboratory as part of the

Manhattan Project. He later worked at Hydrocarbon Research, Inc. (HRI) of New York City from 1946-59, where he became an expert in industrial fluidization processes. He was a self-employed consultant from 1959 to 1967 and then joined the chemical engineering faculty of the City College of The City University of New York. At City College, Squires served as chemical engineering chairman from 1970 to 1973 and as University Distinguished Professor from 1974 to 1976. He joined the chemical engineering faculty at Virginia Tech in 1976, and was Frank C. Vilbrandt



Squires
(photo circa 1983)

Professor of Chemical Engineering from 1976 to 1982 and University Distinguished Professor from 1978 to 1986.

Those who knew Squires will remember his quick wit, broad interests, and enthusiasm for teaching, mentoring and helping young people in their careers. Since his retirement from the department in 1986, he continued to enjoy a variety of activities in music, philosophy, anthropology, and world travel. He was particularly proud of his book, The Tender Ship: Governmental Management of Technological Change, published in 1986, that shared his many unique insights and experiences about how government could productively get involved in technology development. In 2011, he published From Toumai to G. Stein and O. Wilde, a book that describes his latest interests in human evolution.

STUDENT NEWS

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

The department awarded 74 B.S. degrees during the spring 2012 graduation. We are happy to report that more than 75% of these students had plans for either full-time employment or graduate school.

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

Ratthaporn Chatchaidech, M.S.

Lubrication Forces in Polydimethylsiloxane (PDMS) Melts
Advisor: Professor William Ducker

David Herman, M.S.

Stabilization of Weakly Charged Microparticles Using Highly Charged Nanoparticles
Advisor: Professor John Walz

Miles Dion Ngute, M.S.

Comparison of Multieffect and Extractive Distillation Systems for Corn-Based Ethanol Plants
Advisor: Professor Y.A. Liu

Ai-Fu Chang, Ph.D.

Process Simulation of Next Generation Liquid Fuel Production – Commercial Hydrocracking and Biodiesel Manufacturing
Advisor: Professor Y.A. Liu

Chen Chen, Ph.D.

The Manufacture of Polymer Nanocomposite Materials Using Supercritical Carbon Dioxide
Advisor: Professor Don Baird

Matthew Green, Ph.D.

Tailoring Structure and Function of Imidazole-Containing Block Copolymers for Emerging Applications from Gene Delivery to Electromechanical Devices
Advisors: Professors Tim Long (Chemistry) and Richey Davis

Michael Heinzer, Ph.D.

Phase Behavior and Ordering Kinetics of Block Copolymers in Solution During Solvent Removal
Advisor: Professor Don Baird

Kevin Ortman, Ph.D.

Assessing an Orientation Model and Stress Tensor for Semi-flexible Glass Fibers in Polypropylene Using a Sliding Plate Rheometer for the Use of Simulating Processes
Advisor: Professor Don Baird

Kiran Pashikanti, Ph.D.

Predictive Modeling Large-Scale Integrated Refinery Reaction and Fractionation Systems from Plant Data: Fluid Catalytic Cracking (FCC) and Continuous Catalyst Regeneration (CCR) Catalytic Reforming Processes
Advisor: Professor Y.A. Liu

Gregorio Velez-Garcia, Ph.D.

Experimental Evaluation and Simulations of Fiber Orientation in Injection Molding of Polymers Containing Short Glass Fibers
Advisors: Professors Don Baird and Peter Wapperom (Math)

Shaw named 2012 Outstanding Graduating Senior in Virginia Tech College of Engineering

Chemical Engineering major Ryan Shaw of Roswell, GA, was named the Outstanding Graduating Senior in the College of Engineering for the 2011-12 academic year. Shaw, who also majored in mathematics and minored in chemistry, is the son of Gill and Karen Shaw.

As an undergraduate, Shaw was a member of the University Honors Program and was the recipient of numerous merit-based scholarships and awards, including the prestigious Barry M. Goldwater Scholarship. He conducted undergraduate research in the chemistry department, served as a teaching assistant, was a team leader of the Chem-E Car design team, and worked as a co-op student with Eastman Chemical Company.



Shaw was president of the student chapter of the American Institute of Chemical Engineers and was a member of Omega Chi Epsilon Honors Society and the International Association for the Exchange of Students for Technical Experience. He served as a volunteer with elementary school students, and was involved in community service activities with National Chemistry Week, E-Week, Relay For Life, and Meals on Wheels.

See Shaw, page 8

Hord - from page 4

Science to Achieve Results (STAR) award. At Virginia Tech, she serves as the program director for a new interdisciplinary graduate education program on Computational Tissue Engineering. The program focuses on training a new community of graduate students at the confluence of tissue engineering, systems biology, and computer science.

She also founded and co-directs the Institute for Critical Technology and Applied Science Center for Systems Biology of Engineered Tissues, which seeks to define a new synthesis between tissue engineering and systems biology.

In July 2012 Rajagopalan conducted a week long summer camp for female high school students entitled "Cells and Biomaterials."

STUDENT NEWS

Cox named outstanding student

Megan Cox, a 2012 chemical engineering senior from Silverdale, WA, received the James Lewis Howe Award for Outstanding Student. This award is presented annually by the Virginia Blue Ridge Section of the American Chemical Society and consists of a certificate and a copy of the Merck Index, which are presented at one of the section's dinners. Megan was a member of AIChE and

Phi Sigma Pi (a professional national honors society), and was active in Relay for Life and the Big Event. After graduation, she will be continuing her studies at Virginia Tech as a Ph.D. graduate student in the School for Biomedical Engineering and Sciences.



Shaw - from page 7

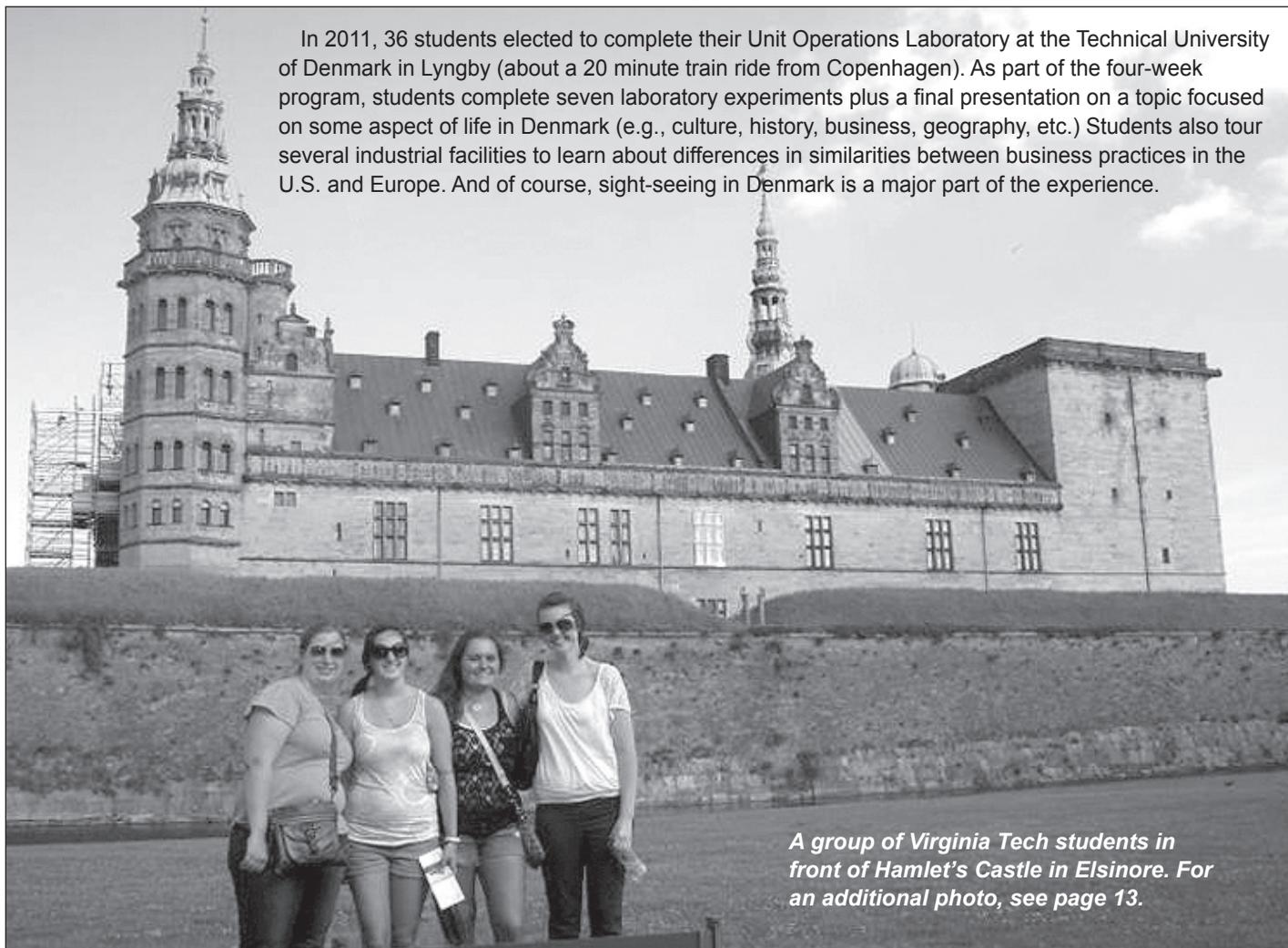
After graduation, Shaw accepted a full time position with Eastman Chemical Company at its Kingsport, Tenn., facility.

The Outstanding Graduating Senior Awards are presented at the Student Honors Day Banquet each spring. These awards are co-sponsored by the Virginia Tech Alumni Association and the senior class. The purpose of the award is to recognize outstanding student performance in each college of the university.

Students are selected on the basis of their grade point average (3.4 or higher on a 4.0 scale) and outstanding performance in several or all of the following areas: academic achievement, extracurricular activities, leadership positions, and contributions of service to the university and/or community.

Taking UO lab in Denmark a popular option

In 2011, 36 students elected to complete their Unit Operations Laboratory at the Technical University of Denmark in Lyngby (about a 20 minute train ride from Copenhagen). As part of the four-week program, students complete seven laboratory experiments plus a final presentation on a topic focused on some aspect of life in Denmark (e.g., culture, history, business, geography, etc.) Students also tour several industrial facilities to learn about differences in similarities between business practices in the U.S. and Europe. And of course, sight-seeing in Denmark is a major part of the experience.



A group of Virginia Tech students in front of Hamlet's Castle in Elsinore. For an additional photo, see page 13.

STUDENT NEWS

Students launch Chem-E-Car team

One of the exciting events our students prepared for during the 2011-2012 academic year was the Chem-E-Car Competition. A team was formed in the fall semester to design, build and test a small vehicle with the goal of ultimately competing against other universities at the AIChE Spring regional student conference, held at Clemson University.

The main team members – Hassan Assaad, Mohamed Chouat, Josh Henry, Tony Himes, Tim Kent, Ryan Shaw, and Amanda Vermaaten – undertook quite a challenge, as typically it takes years for a team to be prepared for competition. Strong support was also provided by Kerry Goldsmith, Yousef Hanif and Megan Salvato.

One of the more challenging aspects of the competition is that the vehicle must be powered by a chemical reaction and travel a prescribed distance, with the distance being provided only a few minutes prior to the competition. As the stopping mechanism must be a chemical reaction as well, the contest truly tests the chemical engineering skills of the competitors.

Our team achieved their goals with flying colors, creatively building a 4 wheel



Members of the 2011-12 Chem-E-Car team. From left to right: Megan Salvato, Ryan Shaw, Kerry Goldsmith, faculty advisor Professor Peter Rim, Tim Kent, Amanda Vermaaten, Yousef Hanif, Tony Himes, Hassan Assaad, Josh Henry, and Mohamed Chouat.

drive, hydrogen fuel-cell powered vehicle with an iodine clock stopping mechanism.

Against all odds, the team met the competition deadline and was able to finish in the middle of the competition field. Their advisor, Professor **Peter Rim**, com-

mented, "The team's achievement was remarkable and was particularly impressive given the tight schedule."

The team graciously acknowledges alumnus Steve Cope (B.S. ChE 1981), who provided funding for the project.

Parham receives AIChE award



Parham

Based on her work as part of a tissue engineering research group and her overall academic achievements, Virginia Tech chemical engineering student Reisha Parham, of Chesapeake, Va., received a 2011-12 American Institute of Chemical Engineers' Minority Scholarship Award. Parham worked for the past two years in the research lab of chemical engineering Professor Padma Rajagopalan on a project focused on the design and assembly of three-dimensional liver-mimetic cellular architectures. Parham, who has made the academic Dean's List

since her freshman year, is a member of the Virginia Tech chapter of the American Institute of Chemical Engineers, and has served as AIChE's Student Government Association representative.

Samavedi awarded research fellowship



Samavedi

Satyavrata (Satya) Samavedi, a 4th year chemical engineering Ph.D. graduate student working with Professors Abby Whittington and Aaron Goldstein, was awarded a Francis Research Fellowship from the Virginia Tech Graduate School. The David W. Francis and Lillian Francis Scholarship Fund was established to provide graduate fellowships in research emphasizing longer, safer, and healthier lives. The Francis Research Fellowship includes a stipend of \$18,000 plus tuition for one academic year. One such fellowship is awarded annually. Samavedi's research focuses on regenerating tissue interfaces using graded electrospun scaffolds and stem cells. Using different approaches, he investigates the role of mechano-chemical gradient cues in influencing stem cell behavior to promote regeneration of ligament-bone transitions.

ALUMNI NEWS

Lohr appointed to state commission

Virginia Governor Bob McDonnell has appointed alumnus David Lohr (B.S. ChE 1976) to the Manufacturing Development Commission.

The commission is

responsible for assessing manufacturing needs and formulating legislative and regulatory remedies to ensure the future of the manufacturing sector in Virginia.

Lohr, who is President

and Executive Director of the Commonwealth Center for Advanced Manufacturing (CCAM), is an active and founding member of the department's advisory board and also serves on the Col-

lege of Engineering's Advisory Board and Committee of 100.



Lohr

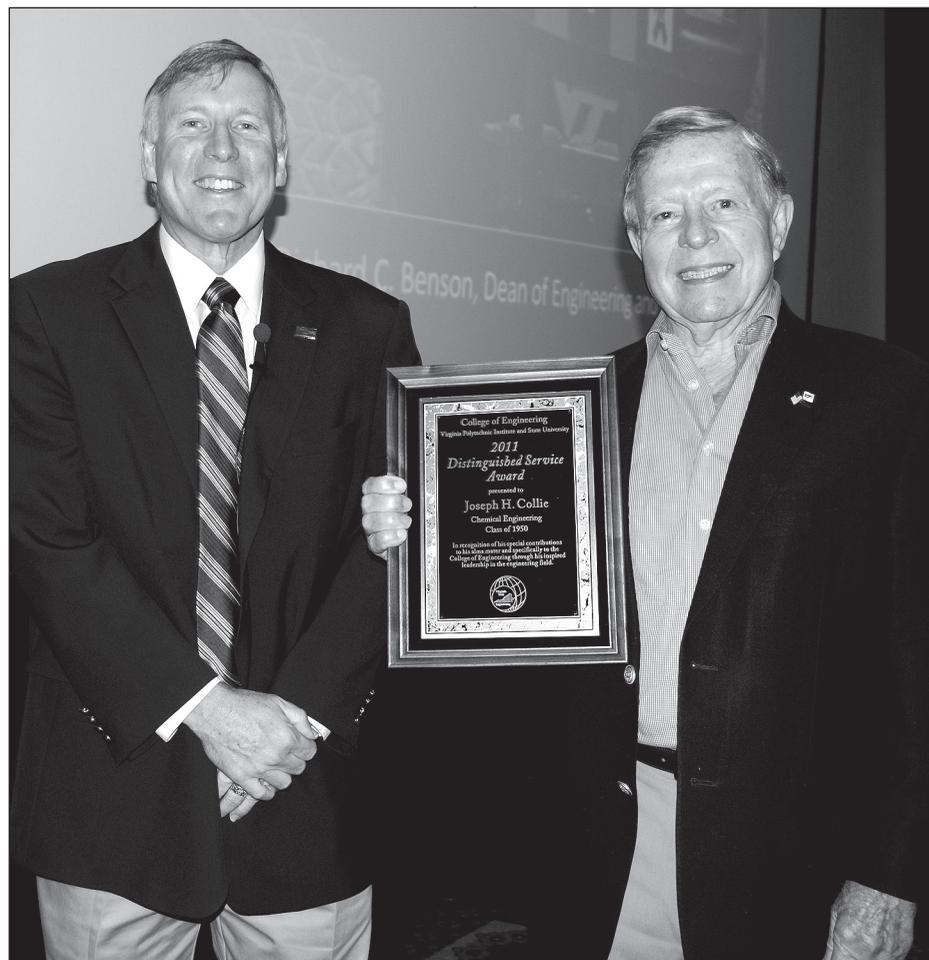
Collie awarded engineering service award

Alumnus Joseph H. Collie (B.S. ChE 1950) received the 2011 College of Engineering Service Award. Collie, who currently resides in Durham, NC, was a combat infantryman in World War II, and when he returned to the United States, he used the G.I. bill to pay for his college education.

Upon his graduation he joined DuPont, and then spent some time at another smaller company. In 1969, Collie decided to pursue the American Dream and start his own company, Southchem, based in Durham, N.C. He built this chemical distribution firm into a thriving business, one that he sold in 1992, but continued as a member of its board.

In 1995, Joe and his wife Barbara Collie presented Virginia Tech's chemical engineering department with a \$1 million gift. He specified this money should be used to establish a chaired professorship dedicated to developing an interdisciplinary program in chemical distribution and marketing. The Collie Professorship is awarded to a distinguished professor who has extensive industrial experience and expertise in production, marketing, and sales of chemical products to introduce chemical engineering students to advanced business and marketing concepts in chemicals distribution management.

Today, Collie is an active member of the chemical engineering Advisory Board, and he and his wife recently established another endowment within



Joe Collie, right, receives the 2011 College of Engineering Distinguished Service Award from Engineering Dean Richard Benson.

chemical engineering, the Joseph and Barbara Collie Undergraduate Scholarship.

He is a member of the *Ut Prosim*

Society of Virginia Tech, the College of Engineering Committee of 100, and has also served on the University's Foundation Board.

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 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.

1938

Watson C. Warriner (BS)

Watson was recently interviewed by Cindy Kelly from the Atomic Heritage Foundation in Washington, D.C. about his involvement with the Manhattan Project during World War II. (Videos of the interview can be found on YouTube.) A native of Richmond, VA, Warriner joined DuPont in 1939 and worked in the Design and Construction Divisions until mid-1955. During the war years of this period, he worked at a number of ordnance plants (producing smokeless powder, TNT, RDX) and also at the Manhattan Project separations plants at the Hanford Engineer Works in Richland, WA. Warriner retired from DuPont in 1981 and currently resides in Greenville, DE, with his wife Ann.

1963

John A. Davenport (BS)

John reports that he worked for Industrial Risk Insurers for 36 years. He began as a field engineering in Philadelphia, PA (2 years) and then in Baton Rouge, LA (5 years). He transferred to Home Office in Hartford, CT as an Account Engineer and was then promoted to Research Department. Eventually, he became Assistant

Vice President and Director of Research. He specialized in Loss Prevention and Process Safety for Oil, Chemical and Petrochemical insured's. John published numerous papers for the AIChE Loss Prevention Symposia Committee and other organizations. He authored and co-authored a number of books for the National Fire Protection Association and then Center for Chemical Process Safety. After retirement from IRI in 2001, John worked for the Center for Chemical Process as a Staff Consultant. Now, fully retired, John volunteers for the Boy Scouts of America – he is a Silver Beaver recipient. He currently resides in West Point, VA and can be reached at jdavenport4889@gmail.com.

1980

Stanley (Lee) Sampson (BS)

Stanley is currently VP of Sales and Marketing for Eka Chemicals Division of AkzoNobel. He reports that he remembers fondly about long days and nights in Randolph Hall, especially during Unit Operations Lab. "It was the kind of experience that stays with you for life."

1992

Kevin N. Basham (BS)

In November 2011, Kevin

was promoted to Technical Services Department Manager at Marathon Petroleum Company's Catlettsburg, KY refinery. He resides in Hurricane, WV and can be reached at knbasham@marathonpetroleum.com.

2001

Richard Oldland (BS)

Other degree(s): M.S. in ChE, 2004 from Virginia Tech
Richard has been promoted to Operations and Site Maintenance Manager for Dow Chemical in Ringwood, IL (outside of Chicago).

2003

Alyson Sagle Beldon (BS)

Other degree(s): Ph.D. in ChE, 2009 from the University of Texas at Austin
Alyson is currently a Senior Development Engineer at Air Products and Chemicals, Inc.

Courtney Graybill (BS)

Other degree(s): Minor in business from Virginia Tech; MBA from Wharton School in 2011.
Courtney is currently an associate at Booz & Co. She can be reached at courtney.graybill@gmail.com.

2007

Mark Roosz (BS)

Other degree(s): MS in Engineering Management from

the University of Dayton

Mark is currently a Deputy Program Manager at the Assured Aerospace Fuels Research Facility for the US Air Force. He is working to develop, test and certify the next generation of alternative-produced jet fuels for military and civilian aircraft. He can be reached at mroosz@vt.edu.

The VIRGINIA TECH DEPARTMENT of CHEMICAL ENGINEERING
CONNECTION

DONORS TO THE DEPARTMENT

The department gratefully acknowledges the following individuals, corporations, foundations and trusts for their support during 2011.

INDIVIDUALS

Allen R. and Dr. Ann S. Taylor
Lauren K. Angleton
Paul J. and Lisa A. Baduini
James R. Ballengee
Dr. Michael D. and Denise Barrera
Kelly E. Belz
Dr. G.G. Bengé
Reagan D. and Elle E. Black
Matthew S. and Shana Bolen
John H. Boyd III
Erin E. Bradshaw
Dr. James R. Bragg
Robert L. Brewer
Dr. Heidi E. Burch
Dr. Thomas A. Carnevale
Laura A. Chevalier
Timothy J. Conway
Steven R. Cope
Deborah B. Crain
Eddie G. Dalton, Jr.
Dr. George J. Demakis
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Virginia Tech students participating in the Unit Operations Laboratory at the Technical University of Denmark sightseeing in Nyhavn (part of Copenhagen).

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