

Chemical Engineering Department

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Faculty

Daniel Anastasio
Assistant Professor

Heather Chenette
Assistant Professor

Ghazal Hariri
Visiting Assistant Professor

David Henthorn
Associate Professor

Kimberly Henthorn
Associate Professor

Scott McClellan
Associate Professor

Gregory Neumann
Assistant Professor

Adam Nolte
Department Head and Associate Professor

Irene Reizman
Assistant Professor

Sharon Sauer
Associate Professor

Atanas Serbezov
Professor

Staff

Frank Cunning
Technician

Lisa Harwood
Secretary



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Notes from the Department Head – Dr. Adam Nolte



Dr. Adam Nolte

Hello to all of our alumni and department friends! It has been a while since the last newsletter. I am happy to report that the department is doing quite well, although we have been going through some bittersweet transitions, saying “good-bye” with the retirement of some well-known and admired faculty members, while also excitedly welcoming new colleagues.



Dr. Ron Artigue



Dr. Hossein Hariri

With 63 combined years of experience, Dr. Ron Artigue and Dr. Hossein Hariri have each retired within the past year – Ron retired last summer, and Hossein after this academic year’s fall term. Although we still see them from time to time around the office, it has been hard to say goodbye, as Ron and Hossein have made such unique and valued marks on the department. We have dedicated

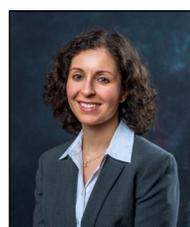
a special section of this newsletter (see page 3) to share a few photos from each of their retirement parties – both held at the department’s favorite restaurant in Terre Haute, Umi Grill!

At the same time we’re saying “goodbye”, we have been pleased to welcome *four* new faculty members to the department this academic year.

Dr. Daniel Anastasio, who joins us as an assistant professor, completed his Ph.D. at the University of Connecticut. Dan’s research background is in osmotically-driven membrane processes and engineering pedagogy, particularly in the areas of game-based learning and CHE laboratory experiment design. Dan is currently working to introduce “makerspace”-type resources into the department (3D printing, prototyping, etc.)



Dr. Dan Anastasio



Dr. Ghazal Hariri

Dr. Ghazal Hariri, who has joined us this year as a visiting assistant professor, is a department alumna and the eldest daughter of our latest professor emeritus. After completing her B.S. in our department, Ghazal

(cont'd on page 2)

Notes from the Department Head – Dr. Adam Nolte (cont'd.)

moved on to Vanderbilt where she completed an M.S. in biomedical engineering and a Ph.D. in chemical and physical biology. Her graduate work focused on nanomaterials for drug delivery and imaging for cancer treatment. Ghazal has helped teach specialized elective courses for our students this year in the areas of nanomaterials and drug delivery.

Dr. Gregory Neumann, who joins us as an assistant professor, is also a department alumnus. After graduating from Rose, Greg completed his Ph.D. at Notre Dame in the area of heterogeneous catalysis. Greg is currently working to start undergraduate projects in the area of chemical reaction engineering, with the plan of introducing new project ideas into the unit operations laboratory experience.



Dr. Greg Neumann

Dr. Irene Reizman, who joins us as an assistant professor, completed her undergraduate work at the University of Michigan, and her Ph.D. at the Massachusetts Institute of Technology. Irene's research interests are in biochemical engineering, and include the development of improved microbial strains for renewable chemical production. She recently carried out a project in this area in Germany, as part of the Green Talents program. Irene is mentoring several senior and freshman design teams this quarter and is looking forward to working with students on design and biochemical engineering projects.



Dr. Irene Reizman

Outside of our personnel changes, life in the department has been humming along as usual. After peaking last year, enrollment has inched down slightly – we currently have approximately 300 students enrolled, including six graduate students and two exchange students. Our department was again honored last fall by U.S. News and World

Report as the #1 ranked, non-doctoral granting chemical engineering program in the country. Rose-Hulman was also again ranked #1 overall among non-doctoral granting engineering schools. Every year we add new equipment to our labs and invest in our infrastructure to ensure we are delivering the best possible chemical engineering education for our students. We have made some excellent additions to our faculty this year, and with Frank and Lisa's continuing help, I'm happy to report that the department's future looks very bright!

I invite you to share your ideas for content and your alumni news items. These should be passed on directly to Lisa Harwood (harwood@rose-hulman.edu, 812-877-8430). This year we are also trying in a special way to promote our online initiative to help Rose CHE alumni, students, and faculty better network: The LinkedIn "Rose-Hulman Chemical Engineering Mentoring Group". If you have a LinkedIn account, you can join this group at <https://www.linkedin.com/groups/6714160>. The site allows for conversations of substance outside the classroom – students can post questions, and alumni can provide advice and guidance – please check it out and join the conversation! Thank you for all you do to make our department great!

Designating the Chemical Engineering Department as the recipient of your financial gift to the Institute helps us continue to offer cutting-edge educational equipment and learning experiences to our students. Click [here](#) for more information on the various ways to give, or contact Jennifer Kenzor in Institutional Advancement at Jennifer.Kenzor@rose-hulman.edu.

Thank you for your support!



Retirement Parties Photos

Dr. Ron Artigue-May 2015



Dr. Hossein Hariri-February 2016



Department Snapshots from the Past Year



Dr. Heather Chenette and her husband, Dr. Nathan Chenette (Visiting Assistant Professor of Mathematics) at the beginning of the Terre Haute Half Marathon, September 2015.



Dr. Adam Nolte at the end of the Terre Haute Half Marathon, September 2015.



*3rd Annual SACHe PSM Faculty Workshop
Held at Chevron Richmond Technology Center
Richmond, CA
August 10 through August 12, 2015*

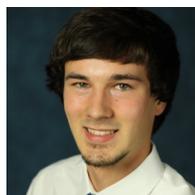
Dr. Sharon Sauer (center row, 4th from the right) attended the 3rd Annual SACHe PSM Faculty Workshop last summer in California.



Dr. Greg Neumann getting into the spirit in the classroom on St. Patrick's Day!

American Institute of Chemical Engineers

After a successful year with President Brent Hukill, the AIChE Student Chapter is continuing the legacy. Participation has reached a recent high, with 25+ students attending the monthly chapter meetings. Better yet, with this year's exceptionally motivated officer team, we expect to meet our goals of further growth, increased opportunities, and improved faculty relations. The last of these is made easier with incoming advisor, Dr. Greg Neumann. While Dr. Nolte's support has been immensely appreciated, Dr. Neumann offers a fresh perspective.



Brad Strickland
President, AIChE

To encourage growth and community, we collaborated with Omega Chi Sigma for a second time in co-hosting a Co-op/Internship/REU Seminar. Three students presented their respective experiences to offer personal insight on industry and research opportunities. In April, we hope to join forces with Alpha Chi Sigma to create an entertaining chemistry booth for the Girl Scout STEM Fair.

To continue improving participation, we are shedding the stigma that AIChE is a strictly-professional organization. Chapter meetings have become more laid-back and tailored towards students, while still delivering essential information. At the same time, our new professional chair position allows us to provide more professional activities – especially plant tours. With these improvements, and more on the way, we anticipate another great year for AIChE!

If you are interested in getting involved through plant tours, info sessions, or sponsorship, please contact me at strickbg@rose-hulman.edu.

Chem-E-Car

Chem-E-Car club is an organization that gives students the opportunity to design and build a model car that operates via chemical mechanisms. The car designs must fit within a certain specification and must abide by safety rules set by AIChE. The club participates in AIChE's regional competition each year, competing against other teams from across the na-



Casey Mihal
President, Chem-E-Car

tion. The top five teams of the regional competition move on to the national competition. During the competition, the cars drive a fixed distance carrying a certain payload, both of which are decided the day of the competition. The teams are judged based on how far the car is from the finish line.

The 2015 Rose-Hulman Chem-E-Car club has grown substantially. The roster currently has over 50 members, up from the 20 members at the start of this year. The club is going to build a pressure based car for the first time in its history at Rose. This will involve a reaction that generates pressurized gas, which will be fed into a pneumatic motor. The club is also starting a new program called special projects. The special projects program will allow club members to pursue any ideas they have related to building the Chem-E-Car. The club will provide them with the help and resources they need in order to complete the projects. The results of the projects will be saved and possibly used for future cars.

The Rose-Hulman Chem-E-Car club would like to thank Dow Chemical, Marathon Petroleum Company, and Milwaukee Tool for their generous support of the team. If you or your company would like to learn more about the Chem-E-Car team, please contact the team advisor, Dr. David Henthorn, at henthorn1@rose-hulman.edu.

Omega Chi Epsilon

The Pi Chapter of Omega Chi Epsilon will be finishing the year strong! Last quarter's efforts gave us a new set of by-laws that will allow us to grow and prosper moving forward. Next quarter will see OXE perform a series of workshops for underclassmen. These will cover Microsoft Equation Editor; Excel and PowerPoint hotkeys; Aspen hotkeys; and perhaps numerical methods in MATLAB. We are also continuing to develop materials for our high school outreach program. The lecture series will cover basic concepts in Chemical Engineering; the differences between Chemistry and Chemical Engineering; and perhaps such topics as safety, specific applications, and more focused coverage of specific fundamentals. If you would like more information, or if you'd like to contribute, please feel free to contact me at huckabd@rose-hulman.edu.



Dakota Huckaby,
President,
Pi Chapter of OXE



ChE Advisory Board Members (2015-2016)

Eric Anders

Cameron Bagley

Brad Berron

Todd Brown

Rich Hale

Lisa Hall

Greg Hevron

Kyle Kamischke

Jason Karlen

Ron Knecht

Dustin Martin

Bernard McGarvey

Craig McIntyre

Bruce Parker

Tony Poparad

Sarah Sanborn

John Swearingen
(2015 Meeting Chair)

The Rose-Hulman ChE Advisory Board is a group of alumni and friends of the department with experience and expertise in various industrial and academic sectors. Members of this group meet annually on campus with the department to provide feedback and advice on our program. The ChE Advisory Board is a critical and valuable part of our team. Its members provide assistance in assessing our goals, planning for the future, and ensuring the relevance and effectiveness of our program. The membership of the advisory board changes from year to year; we attempt to maintain a diversity of industrial sectors, corporate representation, and alumni graduation years.

We are on LinkedIn!

Do you have a LinkedIn account?
Would you like to connect with fellow alumni, current students and faculty? Join our Rose-Hulman Chemical Engineering Mentoring Group on LinkedIn [here](#).



Department News
Catch up on all the latest department news [here](#).

Student Honors & Awards

The following ChE students were recognized at the annual honors and awards ceremony on May 2, 2015.

Graduates of the class of 2015 receiving awards included:

Matthew R. Billingsley (Archer Daniels Midland Award for Excellence in Chemical Engineering)

Abdulrahman N. Alhizami (Sam C. Hite Award)

Alexander D. Clayton (Sam C. Hite Award)

Jose L. Escandon (Jean & Myra Boatman Scholarship Award)

Other undergraduate students receiving awards included:

Christopher J. Sander (Eli Lilly & Co. Clinton Laboratories Award)

Matthew R. Billingsley was honored by Omega Chi Epsilon with the 2014-2015 Outstanding Senior award. This award is decided annually by a vote of the graduating senior class.



Faculty Honors, Awards & News

Drs. Ron Artigue and Hossein Hariri were both officially honored with emeritus faculty status upon their retirements.

Dr. Heather Chenette is currently implementing and assessing learning activities in Heat and Mass transfer through the CPREE (Consortium to Promote Reflection in Engineering Education).

Dr. David Henthorn and chemistry professors Drs. Rebecca DeVasher and Ross Weatherman are developing an electronic badge system to document student professional development. This project is funded by the Kern Entrepreneurial Engineering Network, which in January recognized RHIT for this and other innovative initiatives at the Institute.

Dr. Sharon Sauer attended the 2015 SACHE Process Safety Faculty Workshop at the Chevron Energy Technology Company in Richmond, CA.

Dr. Atanas Serbezov was honored by Omega Chi Epsilon with the 2014-2015 Outstanding Professor Award. This award is decided annually by a vote of the graduating senior class. He also supervised a summer (and now graduate) student to develop an asset management system (AMS) for the field instruments and major equipment in the Chemical Engineering laboratory. The AMS was donated by Endress+Hauser.

