

Jason Keith

From: Sherre Denson
Sent: Tuesday, October 08, 2013 8:23 AM
To: Sherre Denson (sherre@che.msstate.edu)
Subject: Swalm School of Chemical Engineering August / September 2013 Newsletter

Director's Report

This fall we welcome three new research staff members to the Swalm School of Chemical Engineering. As such, we take a moment to welcome them.

- **Dr. Badamkhand Sukhbaatar** is originally from Ulaanbaatar, Mongolia. She came to the United States in 2006 and has been associated with MSU ever since. Currently, she is working as a Postdoctoral Associate on the project for production of biocrude from municipal and industrial wastewater, led by Dr. Todd French. Badmaa is a fan of MSU football and Starkville High School. Prior to joining the CHE program, Dr. Sukhbaatar was a member of the Department of Forest Products.

- **Dr. Erick Vasquez** is a postdoctoral associate with Dr. Keisha Walters and Dr. Santanu Kundu. Currently, Dr. Vasquez is researching particle transport in a human lung, using both computational (CFD) and experimental techniques. Predicting particle fate/deposition will help in drug delivery methods design and in applications involved in mitigating the health hazards caused by pollutant particle inhalation. Thus, understanding CFD models and particle transport through the mucus layers is crucial for these type of developments. Dr. Vasquez is also investigating chemically tailoring the surfaces of nanoparticles for a wide range of nanotechnology applications, including drug delivery and medical imaging.

- **Ben Hartenbower** transferred from Illinois Valley Community College in the fall of 2002, when he entered the chemical engineering program at Mississippi State University. He received his BS in CHE in 2004 and has since become a resident of Starkville. Mr. Hartenbower has recently received his MS in CHE in the spring of 2013 with his thesis entitled, "Fermentation of Glycerol to Biogas under Isobaric and Variable Pressure Conditions." He now works as a research associate for the chemical engineering department at the Energy Institute running the biocrude pilot plant, directed by Dr. Todd French.

School and Alumni News

- The **American Institute of Chemical Engineers student chapter** has been selected to receive an Outstanding Student Chapter Award for 2013. This marks the 13th consecutive year that the chapter has received this distinction.

- The Dave C. Swalm School of Chemical Engineering recently received the second of five \$300,000 gifts from Southern Ionics Incorporated towards the **Southern Ionics Chair**.

- **Dr. Priscilla Hill** has received a grant of \$200,000 from the National Science Foundation entitled "NUE: Multifunctional Nanostructures for Integrated Electrical, Chemical, Mechanical, and Geological Applications: A Multidisciplinary Laboratory Education Program." Dr. Hill's co-PI's include Dr. Carlen Hennington

(Counseling and Educational Psychology), Dr. Brenda Kirkland (Geosciences), Dr. Yaroslav Koshka (Electrical and Computer Engineering), and Dr. Oliver Myers (Mechanical Engineering).

- CHE faculty member **Dr. Neeraj Rai** has received 200,000 Service Units (SUs) of start up allocation on the Cray XT5 "Kraken" system with a peak performance of 1.15 petaFLOP at National Institute for Computational Sciences located on the Oak Ridge National Laboratory Campus. This award is made through the Extreme Science and Engineering Discovery Environment (XSEDE) Program. The Rai research group will use this allocation to carry out NSF funded collaborative research targeted at developing and implementing advanced Monte Carlo algorithms in the CP2K software suite.

- CHE faculty member **Dr. Keisha Walters** has received \$88,208 from the National Science Foundation for a project Multiscale Simulation of Biological Systems. This is new funding as part of a larger NSF EPSCoR project.

- CHE faculty member **Dr. Hossein Toghiani** was promoted to Professor, effective fall 2013.

- **Dr. Keisha Walters** was named the college's interim associate dean for strategic initiatives. The position has been established to assist Dean Achille Messac in implementing newly developed programs meant to drive the mission of the college forward.

- **Dr. Todd French** appeared on Mid Morning with Aundrea on WCBI TV channel 4 to talk about natural resources with energy applications.

- **Dr. Jason Keith** was appointed to the Tennessee Valley Authority's new Regional Energy Resource Council to advise TVA on current and future energy activities.

- **Dr. Todd French** has been appointed as a voting member of the University Radiation, Chemical, and Laboratory Safety Committee at MSU.

- CHE Director **Dr. Jason Keith** will receive the David Himmelblau Award from the Computing and Systems Technology division of the American Institute of Chemical Engineers for his work on hydrogen fuel cell and energy modules.

- For fall 2013, the **CHE enrollment is up** 15.6% for the undergraduate program and up 26.3% for the graduate program compared with fall 2012.

- **Dr. Jason Keith** was elected chair of the Education Division of the American Institute of Chemical Engineers.

Regards,

Jason

Jason M. Keith
Professor and Director
Earnest W. Deavenport, Jr. Chair

Dave C. Swalm School of Chemical Engineering Mississippi State University Mississippi State, MS 39762

Ph: 662-325-2480; Fax: 662-325-2482; email: keith@che.msstate.edu