

Departmental News



Dr. Adrienne Minerick (pictured at left) was recognized for excellence in a number of areas over the past year. She was a selected participant for the Johns Hopkins University Institute for Computational Medicine NHLBI Short Course: Integrative Computational Modeling of the Cardiac Myocyte in August 2008. Dr. Minerick's invited perspective, "The Rapidly Growing Field of Micro and Nontechnology to Measure Living Cells," was chosen as the AIChE Journal Highlight in the September 2008 issue of *Chemical Engineering Progress*.

During the 2008-2009 year, she was the recipient of the MSU's Chapter of Sigma Xi New Investigator Award and the Bagley College of Engineering Academy Outstanding Educator Award and inducted into the Bagley College of Engineering Academy of Distinguished Teachers.

Dr. Rafael Hernandez was recognized with the Bagley College of Engineering Outstanding Research Award for his work in alternative energy with MSU's Sustainable Energy Research Center (SERC), US Environmental Protection Agency (EPA) and the National Science Foundation (NSF).



The paper, "Making the Connections: Facilitating Student Integration of Chemical Engineering Concepts into a Coherent Framework", authored by **Dr. Adrienne Minerick** (below left), **Dr. Rebecca Toghiani** (below center), and **Dr. Keisha Walters** (below right) received the American Society of Engineering Education-Southeastern Section Thomas C. Evans Instructional Paper Award.



Stephanie Rodgers, a 2009 May graduate and AIChE Vice President, was selected for the Bagley College of Engineering Student Hall of Fame. Induction into this group is highly selective, based on academic performance and service to the profession, university, and community. Ms. Rodgers was also selected by the ChE faculty to receive the 2009 George R. Lightsey Leadership Award at this year's Senior Convocation.

George Galloway, a 2009 May graduate and AIChE President, was the recipient of the 2009 Atly and Bette Jefcoat AIChE Outstanding Student Award at the Senior Convocation. Students honored with this award have demonstrated extraordinary service and leadership in AIChE and are the beneficiaries of a cash award made possible by Mr. Hunter W. Henry, Jr., who named this award in honor of Dr. and Mrs. Atly Jefcoat for their dedicated service to the University.

MSU AIChE Chapter wins Outstanding Chapter Award

For the eighth consecutive year, the **Mississippi State AIChE Student Chapter** received the *National Outstanding Student Chapter Award* for the 2007-08 academic year. Awarded annually to 15 chapters (of over 165 chapters across the nation), this recognition is given as a result of student membership and activities in local, regional and national events. The level of service activities in MSU's chapter has been noted at the national level as being among the strongest among the nation's AIChE student chapters. **Congratulations to Dr. Elmore and all of the student members!**



In the fall of 2008 **Doug Deason** (at right) was honored as the Bagley College of Engineering Alumni Fellow as part of a program sponsored by the Mississippi State University Alumni Association. Doug received his B.S. in ChE in 1980 and currently serves as an environmental adviser for ExxonMobil Refining and Supply in Houston. Deason says his greatest professional accomplishment has been recent work with the United States Environmental Protection Agency (EPA), the Texas EPA, and Houston-area industry to design and implement a multi-billion dollar air quality improvement program that will benefit the Houston area's five million residents. Doug and his wife, Joy, who is also an MSU - CHE alum, reside in Houston, TX, and have two children, Drew and Rachel. (excerpted from MSU Alumni Association website)



Mark Peters, a 1987 B.S. graduate in ChE, was inducted earlier this year as a member of the Bagley College of Engineering Distinguished Fellows. This prestigious recognition is given each year to selected alumni who have become leaders in their profession. Mark has been with the Dow Chemical Company for more than 20 years and currently serves as the business manufacturing leader for Dow's polypropylene and polypropylene catalyst & licensing businesses. He also serves as a member of our External Advisory Board. Mark and his wife, Janice, reside in Lake Jackson, TX, and they have 3 children, Christopher, 19, Bradley, 17, and Nicole, 12.

Departmental News



- **Professor Mark White** with members of his group and collaborators delivered 13 presentations at international symposia.
- White accepted the invitation to become a member of the editorial board of the *Open Catalysis Journal*.
- One US patent was issued: **US #7,442,232**

Adsorbents, methods of preparation, and methods of use thereof, with A. V. Iretskii, S. Weigel, R.L. Chiang, J. Brozowski, October 28, 2008.

- He served on three panels (2 EPA and 1 NSF) to evaluate proposals and presided over the Symposium of Inorganic Catalysts; Zing Conferences, Antigua, March 15, 2009.
- Testified before the joint hearing of committees in the Mississippi House of Representatives having purview over Agriculture, Energy, and Forest Products, November 12, 2008.
- **Prashant Daggolu**, a group member, participated in collaborative research program lasting 2 months at Pacific Northwest National Laboratories in Washington state.



Awards and Activities for Dr. Minerick's Research Group

- **Anell Pullen** won 2nd place in *Engineering Poster Competition at the MSU Undergraduate Research Symposium* for "Fluorescent Tagging as a Tool to Assess Hemolysis." (with K. Leonard, and A. Minerick).

• **Eric Rutan** won 2nd place in a subsection at the *AICHE Student Poster Competition (National Meeting)* for "Field Strength Dependency of Red Blood Cell Rupture Rate in Dielectrophoretic Microdevice." (with K. Leonard, and A. Minerick)

• **Aytug Gencoglu** won 2nd place in the *AES Poster Session at the American Electrophoresis Society/American Institute of Chemical Engineers Annual Conference* for "Investigation of Changes in the Surface Chemistry and Morphology of Platinum Microelectrodes Subjected to a Dielectrophoretic Field." (with E.F. Cotten, A. Pullen, S. Thompson, B. Tosun, and A. Minerick); *American Electrophoresis Society Bio-Rad Travel Award*; induction into *Sigma Xi Scientific Research Society as Associate Member*.

• **Kaela Leonard**

Induction into *Sigma Xi Scientific Research Society as Associate Member*.

• **Soumya Srivastava**

Won 1st place, *Outstanding Paper in the Department* for Srivastava S.K., P.R. Daggolu, S.C. Burgess, and A.R. Minerick, "Dielectrophoretic Characterization of Erythrocytes: Positive ABO Blood Types," *Electrophoresis*, Volume 29, Issue 24, Pages 5033-5046, 2008.

Interview and Research cover photo published in "Engineering Diversity at Mississippi State University" magazine (May 2009); featured research cover photo on President's website, MSU website (April 09); Graduate Ambassador of Department of Chemical Engineering, Mississippi State University, MS; *Travel Grant Award-American Electrophoresis Society*

This past year, Dr. **Keisha Walters** was a co-recipient of two awards, ASEE-SE Thomas Evans Instructional Paper Award and Best Educational Paper Award for the Swalm School of Chemical Engineering, along with Drs. R. Toghiani and Minerick. Two undergraduate students in Dr. Walters' group also received awards;



Sarah Crosby (May 2009 graduate) received the 1st Place *Engineering Poster Award* at the 2009 MSU Undergraduate Symposium and **Michael Lamb** received a *MSU EPSCoR Scholarship* for his inhalation drug delivery research. Dr. Walters' research and educational efforts were disseminated via conference proceedings and 26 presentations at national conferences, regional conferences, and other universities -- including 11 presentations by graduate students and 10 by undergraduate researchers.



Dr. Priscilla Hill and her graduate student, **Sheena Reeves**, gave research presentations at the *AICHE National Meeting* in Philadelphia, PA.

Dr. Todd French and **Dr. Rafael Hernandez** have seen their research efforts highlighted several times in the media over the last year.

• Work in progress on using seafood waste as feedstock for fuel was featured by **WLOX** (ABC Channel 13 – Biloxi, Gulfport, Pascagoula) in a story entitled *Mississippi State Research Team Turns Shrimp Shells Into Fuel* (<http://www.wlox.com/Global/story.asp?s=8643560>).

• A **Biodiesel Magazine** story, *MSU Scientists Study Seafood as a Feedstock*.

(http://www.biodieselmagazine.com/article.jsp?article_id=2581)

• Another article, *Making the Best of Wastewater*, in **Biodiesel Magazine** (http://www.biodieselmagazine.com/article.jsp?article_id=2776), highlights work being done by Drs. Hernandez and French as part of their collaboration with MSU's Sustainable Energy Research Center (SERC).

Drs. Hernandez, French, and White are shown at right with representatives of the Air Force Research Laboratory and General Atomics at a kick-off meeting to discuss details of a joint project Intended to commercialize an



inventive process that makes biofuel from the oil of micro-organisms that grow naturally in wastewater. The first phase of this three-phase project provides a \$1.2 million contract to conduct the basic research needed to create the initial design a full-scale facility. (<http://www.bagley.msstate.edu/media/news/index.php?newsID=508>)

Dr. Hernandez was one of the lead organizers for the very successful Mississippi State University Biofuels Conference held August 14-15, 2008. Nearly 200 people attended the conference and heard presentations from leading industry insiders and professors conducting research in sustainable energy.

AIChE Chapter News – What are they up to?

The award-winning Student Chapter of AIChE is a vital component of the undergraduate program at MSU. Opportunities for involvement are numerous and diverse and provide the students with pathways for professional development and service.

Regularly-held Chapter Meetings are often hosted by corporate representatives. Companies represented this year were: Schlumberger, Chevron, Southern Ionics, Citgo, Dow, DuPont, Smurfit-Stone, Georgia-Pacific, Hercules Chemical, ExxonMobil, Lazy Magnolia Brewing Company.

National and Regional Conferences

Eighteen students attended the national Annual Student Conference in Philadelphia, PA, and twenty-six students attended the Regional AIChE Conference at the University of Alabama in Tuscaloosa. Students presenting posters at these meetings were Zach Wynne, Sarah Crosby, Alex Blakely, Melissa Cook, Michael Lamb, Matt Mistilis, and Eric

Rutan. Eric was awarded 2nd Place at the national meeting

in the Food, Pharmaceutical and Biotechnology Division for his presentation on "Field Strength Dependency of Red Blood Cell Rupture Rate in Dielectrophoretic Microdevices".



Service and Outreach Activities

AIChE Mentoring Program

Upperclassmen actively mentor a number of underclassmen regularly in the student lounge. Additionally, there were 2 opportunities for freshmen to meet alumni to discuss (1) the importance of career development and (2) general chemical process safety.



Outreach

- Robotics Workshop for Women in Science and Technology, high school females (grades 9-12), at East Mississippi Community College.

- After-school Robotics Activity for 52 M.O.M.S, outreach organization for children residing in a local government housing neighborhood.

- Program at Fifth Street Middle School in West Point, MS, Robotics for Teaching Science, Math, and Technology Concepts.

- Girl Scout Days, working with over ~60 Girl Scouts in earning merit badges on 2 occasions.

- BEST Robotics Competition, acted as judges and provided lunch for 23 robotics team members.

- Habitat for Humanity, participated in a workday in both the fall and spring.

Campus Service

- Swalm Building - Paint and Clean-up Day
- Swalm Building – Plastic/Can Recycling Program
- Picnic for MSU-Engineering Summer Campers
- Information and Tours for Outstanding Scholars Day Cook-out for CHE Advisory Board
- Advising/Registration Assistance at Honors Orientation

Social Activities

- Tailgates for all home football games
- 10th Annual AIChE Golf Tournament (Homecoming Friday)
- Annual AIChE Christmas Party
- E-Week Activities
- 1st Annual Spring Release (Super Bulldog Friday)



Alumni News – Where are they now?

Seth Roberts, Class of 1991

Currently on international assignment in Horgen, Switzerland (near Zurich) working for Dow Chemical as Commercial Director for Feedstocks, Dow Europe GmbH with global responsibility for buying/trading naphtha and other liquid hydrocarbon feedstocks for Dow's ethylene plants. **My wife, Marcia,** and I live in a small village (Richterswil) on Lake Zurich. **Our daughter, Margaret,** is three and attends pre-school. **Our son, Noah,** is five and attends kindergarten at the Zurich International School. Have been with Dow since I graduated MSU in 1991.



Dan Moore, Class of 1969

Vice-President - Process Technology, Buckeye Technologies Inc., Memphis, TN
Married for 40 years to **Kathy**
Two daughters - **Emily Moore** (Sales) and **Natalie Duncan** (Music Teacher)



Worked for Procter & Gamble for 25 years in fiber development and diaper product development; 3 years at Georgia Pacific (Atlanta) - Technical Service, Product Development and Quality Manager; 12 years at Buckeye Technologies - process and engineering support for manufacturing plants; Much of the last 3 years was spent commuting to our new plant in Brazil.

Jeff Hare, Class of 1987

Plant Manager, Alpharma (pharmaceutical mfg); wife, **Cindy** and 2 kids, **Will** (3) and **Lily** (1) Salisbury, MD

Jerry Mitchell, Class of 1960

My wife (**Thelma** Becker from Jackson, MS) and I have lived in Murfreesboro, TN for 29 years. We have three sons, two live in Murfreesboro and one is in the process of moving to Murfreesboro. We have four grandchildren.



I have an environmental consulting and contracting firm working in the field of process optimization of industrial and municipal wastewater treatment



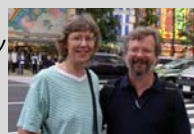
plants, which includes contract management of such facilities. After 12 years in the building products industry, where wastewater was part of the job, I moved fulltime into focusing on "dirty water" and have been there for over 35 years. Beginning in the 1970s, we pioneered contracting the operation of public utilities (water and wastewater). Today a key portion of our work is in providing process optimization studies for customers of the largest public power utility in the United States.

Michael Floyd, Class of 1998

I am working in Dayton, OH, for DuPont as the site Operations Manager. I've been here since June 2000. We have about 60 employees making primarily polymers for the electronics industry. This past year at work has been very challenging, as I am sure it has been for many others, but it is getting better. At home, just north of Cincinnati, my wife and I are proud of our two girls **Lillian** (4) and **Anna** (2).

John Sharp, Class of 1982

Annie (my wife) and I have recently moved back to Oregon after living all over the country with my last company (New Hampshire, San Diego, Seattle). We don't have any children, but we do have Angus, our Australian Shepherd. I am the Corporate Product Compliance Manager for TriQuint Semiconductor, Inc. in Hillsboro, OR, working to ensure our products meet regulations and laws around the world, such as RoHS, REACH, CLP, etc. **Annie** is working as a consultant in Public Health, evaluating the success of various treatment methods for a large variety of health problems.



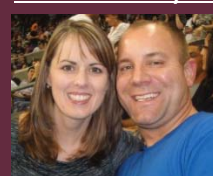
Charles D. Taylor, ChE 1966, MBA 1971

After graduation from MSU, Charles joined PPG Industries as a Process Engineer in Lake Charles, Louisiana. After a leave fulfilling his Army ROTC Commission, he returned to PPG and later returned to Mississippi State to get an MBA. Soon after he was transferred to PPG's Corporate Headquarters in Pittsburgh, PA where he worked in the company's Chemical, Fiberglass, Glass and Corporate Business Groups managing several business units, planning departments, and corporate business ventures. Following his retirement from PPG, he was a consultant with NASA's Mid-Atlantic Technology Applications Center in Pittsburgh. He and his wife **ZonaDale** live in Collierville, TN. They are active in the MSU Alumni Chapter, MSU Foundation and 4-H Foundation. Charles was named a Bagley College of Engineering Distinguished Fellow in 2005.

Steve Eckhoff, Class of 1984

Fifteen years with BASF in US, Asia, and most recently Europe as Business Development Manager, was promoted in August 2009 to Regional Sales Manager, Adsorbents for BASF. Residing in Houston, will manage the region of Americas (Canada, US, Mexico, SA). Two sons, **Miles** (18), a Jr. at Texas Tech, and **Cole** (13) a Nat'l Honor Society member. Still musical, sang the National Anthem for Houston's sports teams '94-'96, now plays guitar, piano, and other instruments for Houston churches.

Michael Barrett, Class of 2002



It's been over 10 years since I first started with CITGO Petroleum as a co-op and am still working there. After about 3 years as a process engineer, I was moved to the Planning and Economics side. After a few years I ended up moving and am now working as a trader in the corporate office. I buy and sell oil for the various refineries that we have in the system. **My wife, Shelli,** and I live just outside of Houston with our 2-year old daughter, **Kailey.**



John Harden, ChE, 2002, PhD ChE, 2006

I've been employed with Albemarle Corporation at their plant in Magnolia, Arkansas since May 2006. I am currently a Senior Chemical Engineer in the Process Technology group, working on various capital improvement projects. I am also the Magnolia Plant contact for support with ChemCad and our corporate physical properties database. I've been married to my wife **Grace Harden,** the former Grace Luginbuhl, March 2008.



Frederico (Fred) Gabriel, Class of 2001

Work for Honeywell, Specialty Materials Division, Process Engineer - Refrigerant 125 & 134 Plants, Live in Prairieville, LA (outside of Baton Rouge)

Thanh-Thao Doan Gabriel, Class of 2001

Work for Honeywell, Specialty Materials Division, Process Engineer - Refrigerant 245 Plant, Married to Fred, Have 2 kids (2 year old girl named **Paris**, 1 month old boy named **Frederico**), Live in Prairieville, LA

Tawayna Bell, Class of 1992

I am currently working as a 5/6 grade math teacher and completing my master's degree in education. While it is not the career path I expected to take with a degree in engineering, my seven years of teaching have been more rewarding than the 10 years I spent in engineering. I see myself as the groomer for future engineers.

Jennifer Magee Riley, ChE 1996, PhD IE 2001

I currently work for SA Technologies, a human factors research firm, as a Sr. Research Associate and a manager in the Research Division. I conduct and manage research in training for situation awareness and decision making, as well as interface and system design for unmanned systems (robotics). I conduct research work in a variety of contexts and domains, supported by many government research organizations (e.g., Army Research Lab, Army Research Institute, NASA, etc.). I was recently named one of Mississippi's Top 50 Business Women (2009 Class). My family and I reside in Madison, MS. I am married to **Dominick Riley**, also an MSU graduate, and we have three children (**Marissa, Courtney, and Makenna**).





News from the 2008-2009 Year

Dave C. Swalm School of Chemical Engineering

Alumni News – Where are they now?

Kaylan Singamshetty, MS 1995

I'm currently working as a Senior Drilling Engineer for Marathon Oil Company in Houston. After graduating in 1995 with a Master's Degree in Chemical Engineering, I was employed by Baker Hughes who were on our campus recruiting. I have travelled well and held many progressively responsible positions in the last 14 years. Helped drill wells in several areas of the world and here in the USA from deepwater Gulf of Mexico to North Dakota! Houston is our home now. Ours is a wonderful family of 4, wife **Veena**, son **Vibhav** (6) and daughter **Krithi** (3).



Larry Burden, Class of 1978

I work as a Senior Process Lead Engineer for KBR in the corporate office in Houston, TX. My family and I live in Houston, TX. I've worked for KBR for about 13 years which includes a 2 year overseas assignment to Kazakhstan as the Process Department Manager for the overseas Production Services office there in Atyrau, Kazakhstan. My work predominantly is in the oil and gas industry on both upstream and downstream processes including refinery design. I'm married to **Rhonda** with 3 children, **Kristy**, **Michael**, and **Sarah**. Michael also graduated from MSU but with a Mechanical Engineering degree and currently lives and works here in Houston with Mustang Engineering.



Jerry C. Welch, Class of 1972

Mr. Welch is senior vice president of Refining for Marathon Petroleum Company LLC. He joined Marathon in 1976 and was appointed to his current position in January 2007. In this position, Mr. Welch oversees operations at Marathon Petroleum Company's seven petroleum refineries. In addition, he is responsible for execution of major refinery projects, formulating long-range plans to ensure effective refinery operation; developing engineering programs to assure maximum safety and efficiency in the refineries; and maintaining the Company's competitive position in petroleum refining. Mr. Welch completed the Northwestern University, Illinois, advanced executive program in 2000. In 2002, he attended the Oxford energy seminar held in Oxford, United Kingdom. Mr. Welch serves on the executive committee and the board of directors of the National Petrochemical and Refiners Association. He is a member of the American Petroleum Institute and the 25-Year Club of the Petroleum Industry. He is a past chairman of the owner representatives' board of the Louisiana Offshore Oil Port (LOOP LLC). Mr. Welch lives in Findlay, Ohio with his wife **Carol**. He has two children. **Jeff** lives in Lexington, KY with his wife **Tara**. **Katie** lives in Savannah, TN with her husband, **Alex Forsbach**.



Leigh Hill, Class of 1984

26 years with Dow; currently working as Integrated Supply Chain Director for Chlorinated Organics and Environmental Area; started my career in manufacturing with roles as hydrocarbons production engineer and project manager, production supervisor for propylene oxide, global improvement leader for ethylene and propylene oxides and then moved to global ISC director for propylene oxide and next into current role. Live in Baton Rouge; married to **William** who also works at Dow but is currently on active duty as wing commander for ANG unit in Jackson, MS. In addition to wing commander he is a C-17 pilot flying medical evacuation mission to/from the ME. Six kids ages 22 to 7.



Glenn Carpenter, Class of 1991

I'm currently a project Engineer for Goodyear Chemical in Beaumont, TX. For the last 9 years I was a production Engineer with Goodyear. I have two children, **Carly** (9) and **Devin** (12).



Jarrod Alford, Class of 2003

I current live in Christiansburg, VA with my wife of 8 years, **Shannon** (MSU - MS in Chemistry, 2005), and our pets, one dog and three cats. I work as a process engineer at Alliant Powder, a commercial gun powder manufacturing facility that is a part of Alliant Techsystems (ATK). I have also previously taught high school math and science for two years. **Shannon**, an AIChE alum, finished her Ph.D. in Biochemistry in February, and she is currently working as a post-doc at Virginia Tech. In the picture we are enjoying travelling on the Napo River during our recent trip to the Ecuadorian rain forest.



Jason Hartsell, Class of 1999

Jason is currently employed as a process engineer for Cherokee Nitrogen in Cherokee, AL. Prior to entering the private sector, he worked as a project engineer and the operations manager for Department of Defense demilitarization projects for the Tennessee Valley Authority. He is married to **Samantha Whitehead Hartsell**, an Auburn alumni who works for the Tennessee Valley Authority. They live in Russellville, Alabama with two dogs, and two cats.



Trent Jeffreys, Class of 2004

My wife, **Kristy**, and I are currently living in Orangeburg, South Carolina. I am working as a Unit Leader for Albemarle Corporation. I am responsible for process units that manufacture antioxidants and flame retardants. My past projects at this plant have involved production of active pharmaceutical ingredients, food additive products, artificial sweeteners, and pharmaceutical intermediates.

Tim Oldham, Class of 2001

SemiSouth, Process Engineer, Starkville, MS

Aaron Smith, Class of 2005

I am in my 5th year of Ph.D. studies at Texas A&M University and will graduate in 2010. I have written 2 book chapters: http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471793698_descCd-tableOfContents.html and <http://www.woodheadpublishing.com/en/search.aspx?basic=bioalcohol%20production>. Three peer-review journal articles in draft that should be submitted in a few months. This fall I am going to present at the China-US relations conference (<http://china-us.tamu.edu>) I am currently married (**Megan Smith**) with no children but have 2 cats and 1 dog.

Ray Trask, Class of 1965

Retired in Baton Rouge. My employers were Shell, Texaco, Jacobs Engineering, Turner Industries and Ford Bacon and Davis (19 years). My wife and I have 2 daughters and 5 grandchildren.

Shirley Chow Anderson, Class of 1990

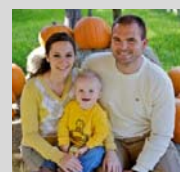
Shirley is a managing patent attorney at Lee & Hayes, a law firm in Spokane, WA. She received her juris doctorate from the University of Dayton School of Law in 2004, recipient of CALI awards for Patent Prosecution and Intellectual Property

Licensing. Shirley's practice focuses on patent preparation and prosecution. She presented "A Year in Review - Patent Law" for the Washington State Bar Association. Prior to law school, Shirley worked as a chemical engineer for The Procter and Gamble Company, where she is an inventor on several utility patents. Shirley and her husband, **Barry**, enjoy snow skiing, bicycling, and camping. They live in South Hill of Spokane with Toby, a beagle and Bailey, a shih tzu.



Kathleen Ash, Class of 2006

I have been working with ExxonMobil since 2006, and am currently working as a Gas Processing Account Manager for Western Gulf of Mexico with ExxonMobil Gas & Power Marketing. Husband, **John Ash** was also a 2006 MSU engineering grad who is working as a Facilities Engineer for Mobile Bay with ExxonMobil U.S. Production Company. We reside in Santa Fe, TX which is a small town on the outskirts of Houston where we have 3 dogs, 1 cat, 4 chickens, and 5 fish. Our son, **Jacob**, born last June, is now 16 months old - blonde hair and blue eyes.

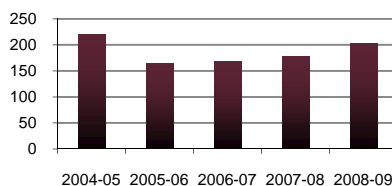


Randy J. Stein, Class of 1983

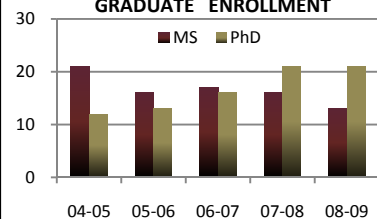
Celebrated 25 years with GE Power & Water; Water & Process Technologies in January, 2009. Recently named Business Development Manager for the Southeast & Caribbean geography for GE Water & Process Technologies Chemical & Monitoring Solutions segment. Resides in Hattiesburg, MS with wife **Renee** and daughter **Victoria** who is a junior at Oak Grove. Daughter **Morgan** is a Sophomore Civil Engineering major at MSU.

Annual Report Information

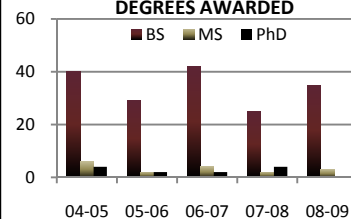
UNDERGRADUATE ENROLLMENT



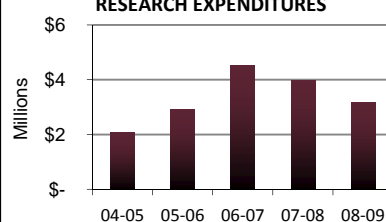
GRADUATE ENROLLMENT



DEGREES AWARDED



RESEARCH EXPENDITURES



Publications

- Sparks, D.L., Estevez, L.A., Hernandez, R., *Supercritical-fluid-assisted oxidation of oleic acid with ozone and potassium permanganate*, **Green Chemistry**, Volume 11, Issue 7, Pages 986-993, 2009.
- Benson, T.J., Hernandez, R., French, W.T., et al., *Elucidation of the catalytic cracking pathway for unsaturated mono-, di-, and triacylglycerides on solid acid catalysts*, **Journal of Molecular Catalysis A-Chemical**, Volume 303, Issue 1-2, Pages 117-123, April 2009.
- Mondala, A., Liang, K.W., Toghiani, H., Hernandez, R., *Biodiesel production by in situ transesterification of municipal primary and secondary sludges*, **Bioresource Technology**, Volume 100, Issue 3, Pages 1203-1210, February 2009.
- Easterling, E.R., French, W.T., Hernandez, R., *The effect of glycerol as a sole and secondary substrate on the growth and fatty acid composition of Rhodotorula glutinis*, **Bioresource Technology**, Volume 100, Issue 1, Pages 356-361, January 2009.
- Sparks, D.L., Hernandez, R., Estevez, L.A., *Evaluation of density-based models for the solubility of solids in supercritical carbon dioxide and formulation of a new model*, **Chemical Engineering Science**, Volume 63, Issue 17, Pages 4292-4301, September 2008.
- Benson, T.J., Hernandez, R., White, M.G., *Heterogeneous cracking of an unsaturated fatty acid and reaction intermediates on H+ZSM-5 catalyst*, **Clean – Soil Air Water**, Volume 36, Issue 8, Pages 652-656, August 2008.
- Paraschivescu, M.C., Alley, E.G., French, W.T., Hernandez, R., *Determination of methanol in biodiesel by headspace solid phase microextraction*, **Bioresource Technology**, Volume 99, Issue 13, Pages 5901-5905, September 2008.
- Gencoglu, A and A.R. Minerick, *Chemical and Morphological Changes on Platinum Microelectrode Surfaces in AC and DC fields with Biological Buffer Solutions*, **Lab on a Chip**, Volume 9, Issue 13, 2009. DOI: 10.1039/B820126A
- Srivastava S.K., P.R. Daggolu, S.C. Burgess, and A.R. Minerick, *Dielectrophoretic Characterization of Erythrocytes: Positive ABO Blood Types*, **Electrophoresis**, Volume 29, Issue 24, Pages 5033-5046, 2008.
- Minerick, A.R., *The Rapidly Growing Field of Micro and Nanotechnology to Measure Living Cells*, Invited Perspective with Cover Figure, **AIChE Journal**, Volume 54, Issue 9, Pages 2230-2237, September 2008.
- Minerick, A.R., V.M. Ugaz, S. Murthy, J.P. Posner, *Review of Electrophoresis and BioMEMS in 2007: American Electrophoresis Society 24th Annual Meeting*, **J Capill Electrophor Microchip Technol**, Volume 10, Issue 5/6, Pages 101-109, 2008.
- Minerick, A. R., *DC Dielectrophoresis in Lab-on-a-Chip Devices*, In: Li, Dongqing (ed). **Encyclopedia of Micro- and Nanofluidics**. Springer, Berlin Heidelberg New York, 2008.
- Minerick, A. R. and G. Thibaudau, *Detection Using Confocal Microscopy*, In: Li, Dongqing (ed). **Encyclopedia of Micro- and Nanofluidics**. Springer, Berlin Heidelberg New York, 2008.14.
- Minerick, A.R. *Desktop Experiment Module: Heat Transfer*, **Chemical Engineering Division - American Society of Engineering Education Proceedings**, Austin, TX, June 2009.
- Minerick, A.R. K.B. Walters, B.B. Elmore, R. Toghiani, P. Hill, M. Bricka, R. Hernandez, H. Toghiani, and T. French, *Cross-Curricular Topic Inventory: Strategic Topic Placement and Resulting Student Accountability*, **Chemical Engineering Division - American Society of Engineering Education Proceedings**, Austin, TX, June 2009.
- Minerick, A.R. and G.T. Thibaudau, *Use of Concept Development Projects in Science and Engineering Courses*, **American Society of Engineering Education Southeast Section Proceedings**, April 2009.
- Soumya K. Srivastava, Anurag K. Srivastava, Adrienne Minerick and Noel N Schulz, *International Students' Challenges- A survey based study*, **ASEE Annual Conference Proceedings**, Austin, TX, June 2009.
- Rowe, M.D.; Walters, K.B., *Synthesis and Characterization of Bioplastics from Polyfunctional Renewable Monomers*, **Proceeding of ANTEC – Society of Plastics Engineers (SPE)**, Chicago, IL, June 22-24, 2009.
- Toghiani, R.; Minerick, A.R.; Walters, K.B., *Making the Connections: Facilitation Student Integration of Chemical Engineering Concepts into a Coherent Framework*, **ASEE Annual Conference Proceedings, Chemical Engineering Division**, Pittsburgh, PA (2008) AC 2008-2170.
- Yan, Qiangu, Phuong Thanh Doan, Hossein Toghiani, Amit C. Gujar, and Mark G. White, *Synthesis Gas to Hydrocarbons over CuO-CoO-Cr₂O₃/H⁺-ZSM-5 Bifunctional Catalysts*, **J. Phys. Chem. C.**, 2008, 112, 11847–11858.
- Zub, Yuryi L.; Melnyk, Inna V.; White, Mark G.; Alonso, Bruno, *Structural features of surface layers of bifunctional polysiloxane xerogels containing 3-aminopropyl groups and 3-mercaptopropyl groups*, **Adsorption Science & Technology** (2008), 26(1/2), 119-133.
- Gole, James L.; Prokes, S. M.; White, Mark G.. *Metal ion induced room temperature phase transformation and stimulated infrared spectroscopy on TiO₂-based surfaces*, **Applied Surface Science** (2008), 255(3), 718-721.
- Gujar, Amit C., and M. G. White, *Ionic Liquids as Catalysts, Solvents and Conversion Agents*, **Catalysis—Vol 21**, Ed. By J. J. Spivey and K. M. Dooley; **Royal Society of Chemistry**, (2009), 21 154-181.
- Shetian Liu, Amit C Gujar, Peter Thomas, Hossein Toghiani; Mark G White, *Synthesis of Gasoline-Range Hydrocarbons over Mo/HZSM-5 Catalysts*, **Applied Catalysis, A: General**, 2009, 357, 18-25.
- Amit C. Gujar, Vamshi Krishna Guda, Michael Nolan, Qiangu Yan, Hossein Toghiani and Mark G. White, *Reactions of methanol and higher alcohols over H-ZSM-5*, **Applied Catalysis, A: General** 363 (2009) 115–121. doi:10.1016/j.apcata.2009.05.004.