



University of Arkansas

ChemE News

Department of Chemical Engineering Alumni Newsletter

Vol. 3, No. 1

Fall 2003

From the ChemE Department Head

This year has been marked with many highlights in the department, many of which you can read about in this issue of *ChemE News*.

A personal highlight came in November when I was appointed department head, a position I have held on an interim basis since Buddy Babcock returned to teaching two years ago. I'm very excited to have this opportunity to continue building on what Buddy started: making the UA ChemE program into one of the best in the nation.

We feel it's important that you have the opportunity to keep up with what's happening in your department, so we will be sending the new *ChemE News* in the spring, summer and fall. In addition, the spring issue will include a copy of *The Distillation Column*, a new student newsletter.

While the ChemE News is a way we can keep you up-to-date with what's going on here, we want to include information about you. Let us know where you are and what you're up to, or share a funny anecdote. Also, let us know what you would like to see in future issues of the *ChemE News*—we want to hear from *you!* E-mail us at cheme@engr.uark.ed.



Largest Gift in Department's 100 Year History Announced



Ralph Martin (BS '58, MS '60) has made a testamentary commitment that will provide at least \$5 million dollars for the Ralph E.

Martin Academic Enrichment Fund in Chemical Engineering, an endowment to support the department's most promising teaching and research initiatives. This is the largest gift ever made to the department. The College plans to rename the department the Ralph E. Martin Department of Chemical Engineering when the estate gift comes to the University.

"The Department of Chemical Engineering—its faculty, students and programs—had a profound impact on me when I was a student," Ralph explained. "My engineering education provided the foundation for my success in the chemical industry, and I am very happy that I can give something back to an institution that means so much to me."

Ralph established the Enrichment Fund in 1995 with a \$108,000 gift. The broad-based endowment has been used to target special opportunities for students and faculty, including the support of award-winning student team competitions such as the WERC and

STaR design contests (see related stories on page 2). The additional funds will be used to support faculty development, student scholarships, graduate student stipends and fellowships, faculty research and development initiatives, and innovative and inspirational teaching.

"Without a doubt, Ralph's gift will forever change the quality and depth of our program," said department head Tom Spicer. "The monies will allow us to create even stronger research and development partnerships and help assure that our graduates have that important competitive edge when they graduate."

Ralph currently serves as chairman of the board of Petrofac, Inc., a full service engineering, fabrication and construction contractor specializing in the design of hydrocarbon processing plants

based in Tyler, Texas. Under Ralph's guidance, Petrofac has grown from fewer than 50 employees in 1981 to its current status as a world leader in the design and fabrication of refineries and gas plants for the oil refining, oil production, gas treating and petrochemical industries.

Ralph is a member of the UA College of Engineering Advisory Council and the college committee for the UA Campaign for the Twenty-First Century.



“Without a doubt, Ralph’s gift will forever change the quality and depth of our program.”

Senior Teams Sweep Top Prizes in Design Contest

Three student teams each took first place in their categories during the 13th Annual WERC International Environmental Design Contest this past spring. It marked the first time in the competition's history that three teams from the same school had taken first place in their respective tasks.

The UA seniors designed a new procedure to recover copper from semiconductor fabrication wastewater, created economically feasible alternative technologies for developing bio-products from forest thinning, and demonstrated a low cost, low energy seawater desalination system suitable for developing countries.

Members of the copper recovery team included Bill Godbold, Josh Clark, Kevin Sharp, Matt Scott, Russell Dotson, Shayla Montgomery and Wes Hedges. Team members who developed bio-products from forest thinning were Charles Schaffer, Chestina Owens, John Buzzard,

Joshua Mourot, Rachel Schkade and Rebecca Buckmaster, and the seawater desalination system team was composed of Andres Meza, Brad Meador, Chad Smith, David Nelson, Jo Ellen Holt, Kate Howard and Nathan Mahurin. ChemE professors Greg Thoma and Roy Penny served as faculty advisors for all three teams.

More than 400 students from universities in the United States, Mexico, India, Canada and the Middle East participated in the competition.

PhD candidate Chun Yen Won took third place and a cash prize in the poster competition at the 10th International Petroleum Environmental Conference held in Houston last month. Teams from Princeton, the University of Oklahoma and the University of Alberta competed in the event.

International

One of the winning teams at the WERC competition traveled to Essen, Germany, this summer to compete in the first international Science, Technology and Research (STaR) Environmental Design Contest.

UA seniors Kate Howard, David Nelson, Chad Smith, Andres Meza and Jo Ellen Holt, presented their solution for a low energy desalination technology to a panel composed of industrial and academic judges from the European Union and the U.S.

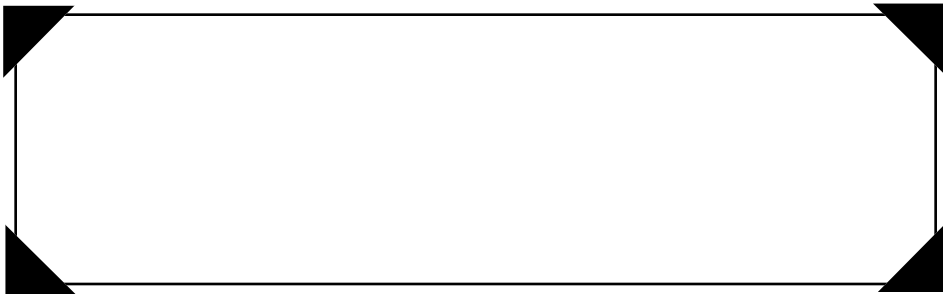
The only team from the United States, the UA group took second place in the competition that included teams from Italy, Portugal, the United Kingdom, Serbia/Montenegro (former Yugoslavia), Bulgaria and Germany.

Chemical Engineering Department Celebrates 100 Years at the U of A

“One hundred years ago the University of Arkansas announced course offerings leading to a degree in chemical engineering. Bauxite had just been discovered in central Arkansas and had sparked dreams of great mineral wealth yet to be discovered and exploited.”

ÑChemical Engineering at the University of Arkansas

Your ChemE department has celebrated its' Centennial anniversary in great style during the past year. In addition to commissioning a book on the history of the department (see right), senior Rachael Jones designed the commemorative art that appears on the front page in the *ChemE News* masthead.



The main celebration occurred during the annual alumni weekend—April 11 to 13. ChemE alumni joined students, faculty and staff at the Maddox Lecture, delivered this year by Dr. Jerry Havens, and the annual spring banquet. Alumni were also involved in the annual golf tournament, dinner at a local restaurant, and an exciting Razorback baseball game!

The alumni pictured above had a great time visiting with old friends. Why not plan now to join them **April 23-25** at the **2004 ChemE Alumni Reunion!**

It's not too late to get your personal copy of *Chemical Engineering at the University of Arkansas, A Centennial History, 1902-2002*, by

Michael S. Martin. The book was written specifically for the department's Centennial celebration and contains historical data and photographs that any alumni would enjoy.

Books are available for \$31.95 each, which includes all shipping and handling charges. Simply send a check made out to **UA Chemical Engineering** to: Janet Bowlin, 3202 Bell Engineering Center, University of Arkansas, Fayetteville, AR 72701, or call her at 479-575-4951.

Babcock Steps Down as Department Head



When Robert E. (Buddy) Babcock stepped down from his role as ChemE department head in 2001, it wasn't because the shredder had taken all his ties. He just felt it was time.

"I have always had the philosophy

that seven to 10 years is the longest anyone should stay in an administrative position. I stayed for 11, and it was time to let someone else take the helm,"

Buddy explained.

Looking back, he's proud of a great number of things that occurred over the course of that decade, one in particular having to do with alumni.

"I'm most proud of the life-long friendships Grace and I have developed

with alumni. Having those opportunities has been a real plus in our lives," he continued.

There are a number accomplishments during his tenure that he finds gratifying, such as putting an emphasis on safety, maintaining labs and improving equipment, creating more continuity in Labs 1,2 and 3, and receiving state appropriations for the Ph.D. and research programs.

"From the very beginning, I had tremendous support from the faculty and staff," Buddy said. "That really helped when things got stressful."

Although he is in his 39th year at the University, he's not ready to spend all his time on the box—yet! He still teaches a full load of classes and continues his research...amazingly, all things that *don't* require a tie! 🧴

Process Dynamic's IsoTherming Can Save World's Oil Industry Billions

He was simply looking for a better- and cheaper-process to make paraffin for the food service industry when he accidentally discovered a revolutionary hydroprocessing technology that could save the oil industry billions of dollars.

Now associate professor Mike Ackerson heads Process Dynamics Inc., a Fayetteville-based firm that has been awarded two U.S. patents on the process. There are an additional two pending and 20 international patents in various stages of approval for his *IsoTherming* technology.



Process Dynamics hydrocracker at Giant Industries refinery in Gallup, N.M.

There are fewer than three years left before the EPA mandate for sulfur content in on-the-road diesel fuel be cut from 500 to 15 ppm. IsoTherming can cleanse diesel down to 10 ppm sulfur at a cost of just 25 to 30 percent of the projected \$45-50 million outlay Process Dynamic's competitors are facing.

The real coup is a working hydrocracker the company has had

Troy Barnhart (BSCHE '96) of St. Louis, died July, 2002 as the result of a boating accident. He is survived by his wife, LeeAnn Barnhart, parents T.J. and Linda Barnhart of Little Rock, and brother Donnie of North Little Rock.

While at the U of A, Troy served as an Engineering Student Ambassador and was active in AICHE.

The family has established a memorial award in the ChemE department in Troy's memory. For more information about the award please contact Kellie Knight at knight@enr.uark.edu.

Faculty News

➤ Two faculty members currently hold endowed teaching professorships in the department:

—**Dr. Ed Clausen** is the Ray C. Adam Chair in Chemical Engineering
and

—**Dr. Greg Thoma** holds the Bates Teaching Professorship in Chemical Engineering.

➤ **Dr. Reed Welker** retired from teaching this past spring following 20 years with the department.

➤ **Adjunct Professor H.S. (Murali) Muralidhara** received the 2003 Tekne Award for Technology Leadership in pioneering separations technology from the Minnesota High Tech Association.

online since April at the Gallup, N.M., Giant Industries refinery that is producing around 4,000 barrels a day of the 10 ppm sulfur diesel.

There is more information about this new technology on the company's website at www.processdyn.com. 🧴

Saxena Named New Dean of Engineering

Ashok Saxena, former Regent's professor and chair of the School of Materials Science and Engineering at Georgia Institute of Technology, was named dean of the UA College of Engineering this past summer.

His research interests focus on the field of mechanical behavior of materials with primary emphasis on fracture mechanics. He is internationally renowned for his contributions to the area of time-dependent fracture mechanics and has pioneered developments in the field since the late 1970s.


He replaced Neil Schmitt who had served as interim dean since July 2002.

Couper Receives ACS Lifetime Achievement Award

The American Chemical Society (ACS) recognized Professor Emeritus James R. Couper for 50 years of service to the UA chapter this past March. He has served as chairman and chair-elect of the ACS and chair, chair-elect and secretary of the ACS Division of Industrial and Engineering Chemistry.

Dr. Couper joined the ChemE department in 1959, 15 years after it was separated from the chemistry department. He served as administrative assistant in the office of research coordination from


1965 to 1968, and was department head for the following decade. He returned to full-time teaching in 1979.

Although he retired from the U of A in 1989, Dr. Couper is still very involved with the department where he team-teaches a course in technical administration. He is a Fellow of the AIChE, and the author of four books, including *Process Engineering Economics*, which was published earlier this year. 

Havens Receives Award from Texas A&M Center

Jerry Havens, a distinguished professor of chemical engineering, received the 2003 Merit Award from the Mary Kay O'Connor Process Safety Center at Texas A&M University. The annual award recognizes an individual who has made significant contributions to the advancement of education, research, or service activities related to process safety concepts and/or technologies, while fitting

within the central theme of the Center: Making Safety Second Nature.

The actual award was a secret, so several ChemE staff worked behind the scenes to get Dr. Havens to the Center's awards ceremony without his discovering that he was a recipient. Apparently they did their job well, because his acceptance speech started with, "I think I've been had!" 

Martin Inducted Into Hall of Fame



This past May, Ralph Martin was inducted as the 48th member of the UA College of Engineering Hall of Fame. Established in 1965, the Hall of Fame honors prominent UA engineering graduates and engineers who have made outstanding contributions to the engineering profession and society. It is the highest honor the College can bestow.

Ralph and family members joined ChemE faculty and staff at a celebratory dinner the evening before the official induction (*above*).



Department of Chemical Engineering
3202 Bell Engineering Center
Fayetteville, AR 72701
<http://www.cheg.uark.edu>

Non-Profit
Organization
Postage
PAID
Fayetteville, AR
Permit No. 278

Mark Your Calendars!

2004
ChemE Alumni Reunion
will be held
April 23 - 25