Notes from the Chairman

Dear Alumni, Students and Friends,

You are receiving this newsletter as the Nation is coping with the aftermath of the terrorist attacks of September 11th. As in every community in America, we, too, at Tulane are slowly recovering from the shock, but now more than ever are determined to fulfill our mission of educating some of America’s brightest young people. At Tulane’s Chemical Engineering Department, we are particularly fortunate in that we have some truly brilliant students.

Right after the printing of the last edition of ChE Wave, in which I was announcing the unprecedented number of three awards to our faculty from the School of Engineering and the Society of Tulane Engineers, in the May 2001 graduation ceremonies we were delighted to find out that Kim O’Connor received yet another award, the University-wide Interdisciplinary Teaching Award.

I am happy to announce the founding of the Tulane Institute of Chemical Sciences, which was created to strengthen the coordinated activities of the departments of Chemistry, Biochemistry and Chemical Engineering, as well as of faculty in other departments with an interest in the chemical sciences. This initiative, spearheaded by Vijay John in our department, has already received a $100,000 grant by the Wall Fund at Tulane, and is likely to lead to large, multi-investigator research grants from several departments.

On September 21, the School of Engineering held with great success its second Engineering Forum and the topic this year was "Advanced Materials: Research, Development and Applications." Chemical Engineering alumni and faculty were very much involved and contributed significantly to the success of the forum. Tommy Meehan, (BS ‘83) and current President of the Society of Tulane Engineers, as well as two of our faculty, Brian Mitchell and Dan DeKee, were members of the organizing committee and the latter two also chaired sessions of the forum. Vijay John was one of the featured speakers, while two other plenary speakers are our graduates: Robert Currier (MS ‘84, currently at Los Alamos National Labs) and Alon McCormick (BS ‘83, currently a Professor at the University of Minnesota). Yet a fourth speaker of the forum, Huk Cheh, now Vice-President for R&D at Duracell, 21 years ago was my own doctoral thesis advisor (he was the Ruben-Viele Professor of Chemical Engineering at Columbia University till last year).

Our endowed fund has been growing steadily, if not aggressively, and whatever the size of your contribution may have been, your support is deeply appreciated. In the next newsletter we hope to announce a major donation to the fund and also list the names of all donors from its inception. I urge you to use the enclosed envelope and hope that the names of all our alumni and friends will be on the list.

Sincerely,

Kyriakos D. Papadopoulos, Chair

Inside This Issue:
- New Department Technician Welcomed
- Ship Island Outing
- Homecoming 2001 Information
Faculty News

Daniel De Kee presented papers at the 72nd Annual Meeting of The Society of Rheology in Hilton Head, SC; and the 3rd International Meeting of the Hellenic Society of Rheology in Patras, Greece. He presented lectures at Proctor & Gamble in Cincinnati and at Unilever in New Jersey. Dan is currently editing the second edition of "Transport Processes in Bubbles Drops and Particles", for Taylor & Francis of New York.

Richard D. Gonzalez served on an NSF/SBIR panel this fall. He gave an invited talk at the ACS meeting in Chicago, and is currently editing a special volume of Topics in Catalysis. Richard will run his 70th marathon in November.

Vijay John gave an invited paper at the ACS National Meeting in Chicago in August, and papers at the American Society of Composites, and the Tulane Engineering Forum, both in September. He represented Tulane at the Board of Regents Conference on Materials and Micromanufacturing, and has been invited to participate in an AFOSR+NASA workshop on Nanocomposites.

Daniel J. Lacks gave a talk at the NATO Advanced Research Workshop on New Kinds of Phase Transitions, held on a cruise ship on the Volga River in Russia in May, 2001. He also gave a seminar in the chemical engineering department at Texas Tech University in March.

Brian S. Mitchell received a Board of Regents Enhancement award with Robert Dotson of the Coordinated Instrumentation Facility for acquisition of sample preparation equipment for the new Scanning Transmission Electron Microscope. He visited American Isostatic Presses in Columbus, OH in August, was a member of an NSF/SBIR panel review in September, and gave an invited talk at the University of Washington Center for Nanotechnology in Seattle in October.

Kim C. O'Connor received the 2001 Tulane Interdisciplinary Teaching Award (see page 3) and is co-PI on a NASA grant award entitled “Spatial organization within prostate cancer spheroids” with S. Clejan and Daniel De Kee. She presented talks at the Society for In Vitro Biology in St. Louis, the 2nd Pan-Pacific Basin Workshop on Microgravity Sciences in Pasadena, and gave an invited talk at the NASA Cell Science Conference in Houston.

Homecoming 2001

Thursday, October 11

4-6:00 PM
President's Reunion Reception for classes of 1951, 1946, 1941, 1936, 1931, 1926 and all alumni who have already celebrated their 60th reunion.
#2 Audubon Place.
Free: reservations required. Call the Office of Alumni Affairs for details.

Saturday, October 13

11:00 a.m. to 1:30 p.m.
Society of Tulane Engineers Jazz Brunch and Annual Meeting
Gentilly Room
Hyatt Regency Hotel
500 Poydras Plaza
$20 per person
Contact: Barbara Hogue, (504) 865-5764

2:30 p.m.
Tulane vs. TCU Football Game
Louisiana Superdome

Alumni News

Molly Charlton (BS, ‘98) and John Sanders (BS ‘98) were married on March 31st, 2001 in New Orleans. They are currently living in Houston where they both work for ExxonMobil. John is managing environmental remediation projects scattered around the U.S., and Molly is working as a process engineer at the Baytown refinery. They are planning to come back to campus with the ExxonMobil recruiting team this fall.
Faculty, staff, graduate students and guests enjoyed their trip to Ship Island, MS on September 23, 2001.

**Faculty Member Wins Teaching Award**

Kim O’Connor, Associate Professor of Chemical Engineering, was awarded a 2001 Tulane Interdisciplinary Teaching Award. The goal of these awards is to recognize and reward full-time faculty who have a sustained and compelling record of excellence in teaching and learning and an ongoing commitment to educational excellence on the undergraduate level. Candidates are nominated by the faculty and staff, and selected by a committee from each school. Awards are made on the recommendation of the Senate Committee on Teaching Quality in the areas of Innovative use of Technology, Interdisciplinary Teaching, and Service Learning, in addition to the overall award and awards to junior and senior faculty. Prof. O’Connor has taught Thermodynamics, Biochemical Engineering and Material and Energy Balances, among other courses. Her other teaching awards include the Society of Tulane Engineers and Lee H. Johnson Award for Excellence in Undergraduate Teaching, (2001) and the Tulane Award for Excellence in Undergraduate Teaching (1999).

**Recent Ph.D. Graduates**

2001
- Richard Enmon (O’Connor, Sloan Kettering)
- Rachel Marcus (Gonzalez)
- Blake Simmons (John, Sandia National Labs)
- Matt Vincent (Gonzalez, Exxon-Mobil)
- Lixong Wen (Papadopoulos, Intel)
- Lixuan Zhu (De Kee, U. Penn)

2000
- Jim Muhitch (O’Connor, Merck/Merial)
- Ning Sun (De Kee, UT-Austin)
- Rong Wu (Papadopoulos, Quaker Chemicals)

**Recent M.S. Graduates**

2001
- Christina Davis (Papadopoulos, Shell)
- Limin Liu (John, Tulane University)
- Nikica Maljkovic (Mitchell, MPT, Inc.)
- Jaoquin Palomo (Pintauro)
- Steve Carr (Law)

2000
- Mignon Frey (Lacks, EDG, Inc.)

**Ship Island**

On September 23rd, a number of graduate students, faculty, staff, post docs, and friends went on a trip to Ship Island. The island is located off the coast of Gulfport MS. It has been said that, “the finest beaches on the Mississippi Gulf Coast are located on Ship Island”. Also on the island is the Fort Massachusetts, a Union fort that was used by federal forces as a staging area for the successful capture of New Orleans in 1862. After arriving by ferry, the day was spent lounging around on the beach, playing Frisbee, swimming, picnicking, playing volleyball, and laying out in the sun. The group departed on the last ferry of the day.
**Demetalization Research Enters 12th Year**

In the spring of 1989, a representative of ChemCat Corporation of Meraux, LA gave a department seminar on a proposed process to demetalize and subsequently recycle Cat Cracker catalysts. Dr. Victor Law’s interaction with the seminar speaker led to a small research contract on a process that involved the fluidized bed processes to (1) calcine the spent catalyst, (2) sulfide the calcined catalyst using H₂S, and (3) chlorinating the sulfided catalyst with chlorine gas. Subsequently, the catalyst was washed using water and then dried to produce a recyclable product. This process was expensive and “messy.” Research at Tulane has led to many process improvements, enhancements, and alterations. The current process involves washing the spent catalyst with proprietary water-soluble reagents followed by drying. The latest process is inexpensive and economically attractive. ChemCat was obtained by Coastal Corporation of Houston, and Coastal was recently purchased by El Paso Natural Gas Company. In total, the project has been funded with over $1.5 million. A demetalization plant is in operation at a refinery in the Northeast. Over the years, more than 40 undergraduates and about 10 graduate students have been associated with this project.

We thank Ian Foley (BS ‘95) for making possible and organizing the recent visit of our seniors to Shell’s Robert Training Center on September 30th. This is an international training facility for Shell production engineers and technicians worldwide, and is also used for courses offered to other oil companies as well. Together with Ian, Sammy Soprano, one of the instructors who run this facility for Shell, was our host and gave us a great tour and tutorial. Our seniors were truly fortunate to get such exposure and we hope this opportunity will continue to be offered to our students in the future.

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**Staff Profile**

The department is pleased to welcome Paul Lane as its new Department Technician. Paul joined the department last fall, and is in charge of departmental computing facilities, unit operations laboratory equipment, and general facilities maintenance. He also maintains the department’s website.

In Paul’s own word, he “grew up on a beach watching the space program launch over the Atlantic,” and has spent most of his life in and about scientific work. He spent three years with the U.S. Army at White Sands Missile Range working on satellite calibration and severe weather studies. The University of Florida then hired him to work with a group predicting freezes for agriculture. He changed jobs and departments at UF to the Agricultural and Biological Engineering Department where he worked for twenty years on various projects. His final position at UF before coming to New Orleans was as Manager of the Biological & Environmental Research Laboratory of the Agricultural and Biological Engineering Department.

According to Paul, “Tulane Chemical Engineering has excellent people, excellent research, and excellent facilities. New Orleans has excellent food, excellent music, excellent art and excellent road surfaces. (OK, I lied about the streets.) I hope to add my share of positive features to Tulane Chemical Engineering.” One of those positive features is Paul’s artistic abilities. His public art in New Orleans can be viewed at the Aquarium of the Americas and the Audubon Zoo.

ChEWave is published twice a year for the alumni and friends of the Department of Chemical Engineering at Tulane University. Address changes and correspondences should be sent to:

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Editor, ChEWave  
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300 Lindy Boggs Building  
Tulane University  
New Orleans, LA 70118
## 2001-2002 Kyocera Lecture Series

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<td>Professor Buddy D. Ratner</td>
<td>University of Washington</td>
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The seminars will be held at 2:00 p.m. in room 243 of the Boggs Center for Engineering and Biotechnology. Refreshments will be served before the seminar. For further information call (504) 865-5772 or 5620.

Many thanks to Kyocera, Inc. for sponsoring the department’s seminar series. For more information on Kyocera, visit their website at www.kyocera.com.
Chemical Engineering Program Objectives

1. Our students will obtain expertise in mathematics, science and engineering principles, with particular emphasis on those that apply to chemical engineering practice.

2. Our students will be able to apply this expertise to identify and solve chemical engineering problems, design chemical engineering processes and conduct and analyze experiments, using the most up-to-date engineering tools and techniques. The students will be able to work effectively with others on such problems, and communicate their results effectively.

3. Our students will be able to carry out their work professionally and ethically, and understand the impact of their work in a global and societal context.

4. Our students will be able to function in an engineering profession which is continually evolving, will be aware of contemporary issues and will be prepared for life-long learning.