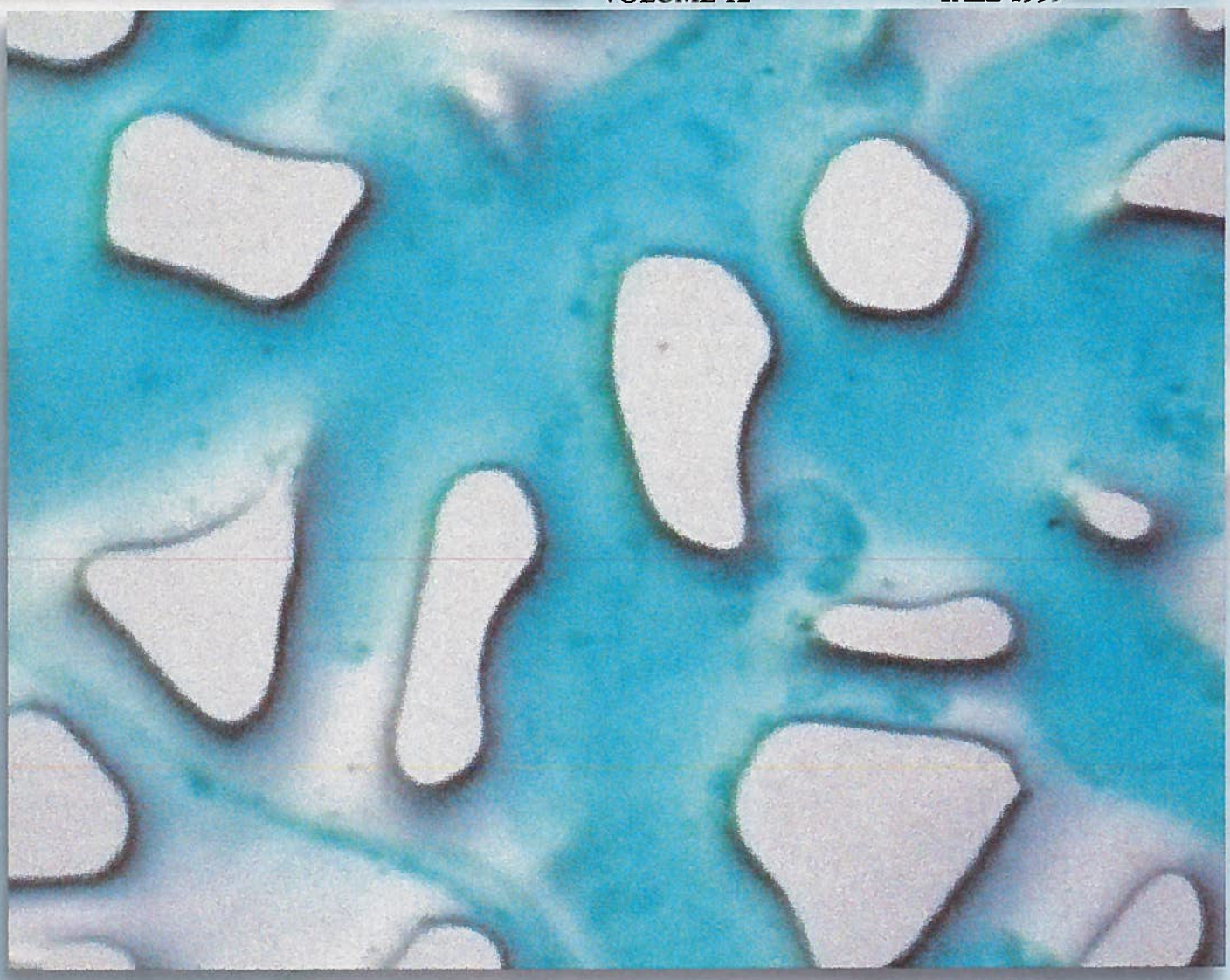
ChEmical Engineering

VOLUME 12 FALL 1999



GORDON A. AND MARY CAIN
DEPARTMENT OF CHEMICAL ENGINEERING

Alumni Newsletter

LOUISIANA STATE UNIVERSITY

Letter from the Chairman

Dear Alumni and Friends,

The past year has been a remarkable one for the department. With many changes and additions taking place, we are looking forward to a bright future as we start this new year and the new millennium.

Let me first apologize for the late arrival of our newsletter. The fall semester of 1999 held many exciting events and we wanted to include all of them in this issue.

Foremost, we are very proud to announce that the Gordon A. and Mary Cain Department of Chemical Engineering has been identified as a priority unit for the University. We are one of only 12 departments so identified and the sole department in the College of Engineering recognized as being a priority unit. This identification presents our department with special opportunities. Already the University has given us an increased number of graduate student stipends.

One of the most important events was the meeting of the Industrial Advisory Committee in October. The committee helped to highlight the positive aspects of the department as well as identify those areas that were in need of improvement. The meeting was chaired by Al Lopez, and cochaired by Alden Andre and Bill Rainey. Other members attending included: Dewey Aucoin, John Berg, Gwen Bingham, Jim Boone, Stephen Delo, Vernon Fabre, Dwight Fontaine, Dave Magee, Jake Martin, Kelly Serio, and Mark Firmin.

Modernization continues in our undergraduate laboratory. Kerry Dooley completed the installation of a National Instruments Systems that is now controlling several experiments. Additional improvements included the donation of a TDC 3000 from Honeywell and Exxon. The TDC 3000 will control our large distillation column. We are also working with Fischer-Rosemount to bring a Delta-V system to the laboratory. This system would control a batch polymerization experiment.

Thanks to Gordon and Mary Cain's generous contribution to the department, we have been able to begin a candidate search for the first Gordon A. and Mary Cain chaired professorship. We have also interviewed several exceptional candidates for the assistant professor position in the department.

The demand remains high for qualified chemical engineers in the industry. Our modernized curriculum, combined with input from our Industrial Advisory Committee, is helping to ensure that our students have the knowledge and experience desired by industry. With the continued growth of the industry in and around south Louisiana, we expect a continued upsurge in our student population.

With all of the improvements and changes taking place, the new year promises to be an exciting and productive time for us. Our most serious need remains a new building that will house new faculty hires, our growing number of students, and our updated technology. As always, if you have any questions or comments regarding our program and the direction in which we're headed, please do not hesitate to come by the department. The faculty and I would be most interested in speaking with you.

Sincerely,

F. Carl Knopf

F. Carl Knopf
Robert D. and Adele Anding Professor and
Department of Chemical Engineering Chairman

If you would like to know more about contributing to the department, please contact Carl Knopf at 225/388-1426.

A Word of Thanks to Our Fall 1999 Contributors

Although financial support has been impressive, departmental expenses continue to escalate, and further renovations are essential if we are to remain parallel with our competitive counterparts. We would like to thank the following corporations and individuals for their role in maintaining the outstanding reputation that LSU has achieved throughout the years:

CORPORATE SPONSORS

Aigis Systems, Inc.
Allied Signal, Inc.
BP Amoco
Chevron U.S.A.
Chevron (Ornite)
Conoco, Inc.
The Dow Chemical Company
DuPont
Exxon
Kerr McGee Chemical
Louisiana Rum Company
Marathon Ashland Petroleum, LLC
PPG Industries, Inc.
Shell Oil
Texaco

PRIVATE SUPPORTERS

Henry and Mary Abbott
Teresa Atkins
Minnie Bennett
Mary M. Blanchard
Joseph Butterworth, Jr.
Gordon and Mary Cain
John and Billie Collier
Armando and Consuelo Corripio
Clarence Eidt
Mark Firmin
Roy Gerard
Frank R. Groves, Jr.
Mr. and Mrs. Lynn F. Guidry
Clifton Hill
Jack Hopper
Gordon L. Jennings
Eugene A. Luc, Jr.
Shirley A. Mayhall
Doris C. Middleton
Stephen Melsheimer
Michael Richard
Murray Rosenthal
Elizabeth Sellen
David Smith
Dirk S. Swanson
JoAnne Troth
MayAnne Troth

On Our Cover

Video image of a reactive polymer flowing into an idealized porous medium. *Courtesy of Karsten Thompson.*

CHEMICAL ENGINEERING is published for the benefit of its alumni and students. Comments and suggestions should be directed to:

EDITORIAL STAFF

F. CARL KNOPF
Chairman

KALLIAT T. VALSARAJ
Faculty Adviser

Gordon A. and Mary Cain Department of Chemical Engineering
110 Chemical Engineering Bldg/
Jesse Coates Hall
Baton Rouge, LA 70803
Telephone: 225/388-1426
FAX: 225/388-1476
email: valsaraj@che.lsu.edu

LSU IS AN EQUAL OPPORTUNITY/ ACCESS UNIVERSITY

CHEMICAL ENGINEERING
WAS PRODUCED BY THE LSU OFFICE OF UNIVERSITY RELATIONS
ANDREA BLAIR, EDITOR
CHERYL GRIFFIN, DESIGNER
PRINTED BY LSU GRAPHIC SERVICES
JOB #00117 • 3.5M • 5/00

Industry Meets Academia

Industrial Advisory Committee Visits the Department

On Friday, October 29, 1999, members of the Chemical Engineering Industrial Advisory Committee met in the Gordon A. and Mary Cain Department of Chemical Engineering to take a close look at how the department is functioning and where improvements were necessary.

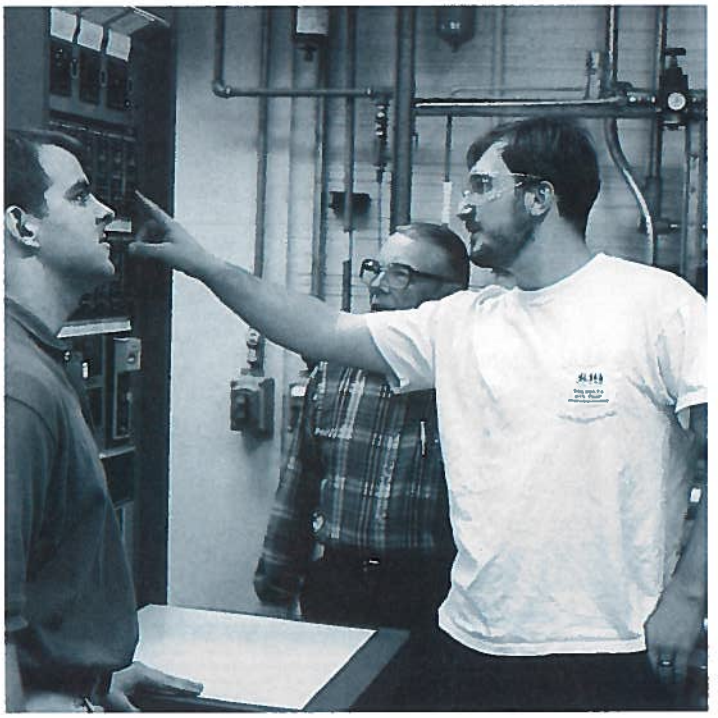
Members of the Industrial Advisory Committee included
Alfredo M. Lopez *(committee chair)*—Exxon Research and Engineering Company
Alden Andre *(committee cochair)*—Formosa Plastics Corporation, U.S.A.
Bill Rainey *(committee cochair)*—Exxon Chemical Americas
Dewey Aucoin—Conoco, Inc.
Michael T. Barrett—Fischer-Rosemount Systems
John Berg—Shell Chemical Company
Gwen Bingham—Motiva Enterprises
Jim Boone—Albemarle Corporation
Stephen Delo—Allied Signal, Inc.
Vernon Fabre—BASF Corporation
Mark Firmin—Honeywell Industrial Automation & Control
Dwight Fontaine—Dow Chemical
Dave Magee—Georgia Gulf
Jake Martin—Exxon Chemical Americas
Kelly Serio—Formosa Plastics

The committee met to discuss the many issues that will be facing the Department of Chemical Engineering over the next several years. The agenda focused on the need for and the possibility of a new chemical engineering building, the department's annual budget, and faculty and student performance.

Committee recommendations included having industry leaders emphasize to LSU administrators the need for a new chemical engineering facility. With the committee's assistance and input, the outlook for the new building appears promising. They gave all faculty members a positive quality ranking and emphasized that tracking student progress, both through school work and employers, would be an asset to the success of the students.

Undergraduate Lab Renovations: Update

The senior and junior labs offer students the opportunity to participate in experiments relating to all aspects of chemical engineering. It is hoped these experiments will accurately depict the types of open-ended problems that many graduates will find on the job; thus it is imperative that the labs offer the best equipment and experimental environment possible. Attempts to upgrade the equipment in the labs have been in place since spring 1998 and most recently have been supported by both our Industrial Advisory Committee and the Dean's Advisory Committee.



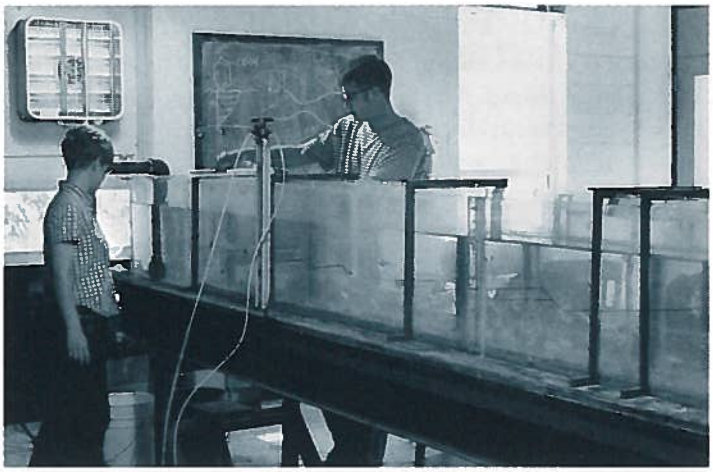
THE EXPERIMENTS PERFORMED IN THE SENIOR AND JUNIOR LABS GIVE STUDENTS A REALISTIC SIMULATION OF THE WORK THEY WILL BE DOING AS CHEMICAL ENGINEERS.

Professors Carl Knopf and Kerry Dooley are actively seeking opportunities to upgrade several of the experiments. For example, they first made contact with Honeywell IAC in spring 1998 and submitted a proposal to upgrade five experiments with interfacing to a distributed control system, the Honeywell TDC 3000. The faculty recognized the great asset the addition of a TDC 3000 would be in related classes, such as those on process control. The system will replace an older Honeywell system used to control a heat exchanger experiment (this system was donated by Union Carbide), as well as other simple control systems in place. This change will provide the faster and more powerful distributed control system the labs have lacked.

Honeywell's recent decision to donate a system that can control the largest of the five experiments (the packed distillation column) was a positive first step in this direction for the department. Exxon Chemical donated the two-story column and ancillary facilities, which have been integrated recently into the senior lab. A maintenance agreement between the Department of Chemical Engineering and Honeywell for the upkeep of the column's control system will ensure that it remain current. The primary candidate for the next control system upgrade is the pH neutralization (nonlinear) control experiment, currently being controlled by a National Instruments system.

The Student Technology Fee and alumni donations to the department have helped to improve the quality of the undergraduate labs as well. The department has quadrupled the number of lab computers since January 1998 and has replaced some old analytical and field instrumentation. In addition, pending grants with the Halliburton Foundation and Fisher-Rosemount/John H. Carter Co., if awarded, will also be used to upgrade lab equipment and control systems.

The changes made in the undergraduate labs will boost the quality of LSU's undergraduate program. The Gordon A. and Mary Cain Department of Chemical Engineering joins such notable universities as Purdue, Georgia Tech, Arizona State, and Florida and Michigan Tech, all of which currently have large distributed control systems installed in their undergraduate labs.



THE UNDERGRADUATE LAB SERVES AS AN INTENSE AND REALISTIC TRAINING TOOL FOR STUDENTS PREPARING TO ENTER THE INDUSTRY.

FROM THE AIChE STUDENT CHAPTER

The LSU student chapter of the American Institute of Chemical Engineers (AIChE) has participated in many community events that facilitate interaction between undergraduate students in chemical engineering and industry professionals. Two special events were hosted this fall by AIChE, including a BASF barbeque that took place before the LSU/Auburn football game on September 18, 1999, and also a Union Carbide SeaFest before the LSU/Houston football game on November 13, 1999.

The new year promises to be productive for the students in AIChE. Many will be attending the southern regional conference in April 2000. The University of Kentucky will host the meeting in Lexington for undergraduate students in schools throughout the South. There students will present their undergraduate research findings to professionals in the industry. LSU expects to be represented by at least 15 students.

AICHE MEMBERS RELAX BEFORE A HOME FOOTBALL GAME.

STUDENTS MEET WITH INDUSTRY PROFESSIONALS AT THE BASF BARBEQUE.

1999–2000 AIChE Student Chapter Officers

President—Scott Strikmiller
Vice President—Robert Durst
Secretary—Andrea Mattson
Treasurer—Oscar Flores
Faculty Adviser—Karsten Thompson

AIChE Baton Rouge Chapter

Danny Reible was elected to serve as the chair of the AIChE Baton Rouge chapter. Armando Corripio continues to act as the chapter newsletter editor, and Ralph Pike is on the Awards Committee. All three are professors in the department.

Fall 1999 Departmental Distinguished Seminar Series

We were fortunate to have the following distinguished speakers as part of the Departmental Seminar Series:

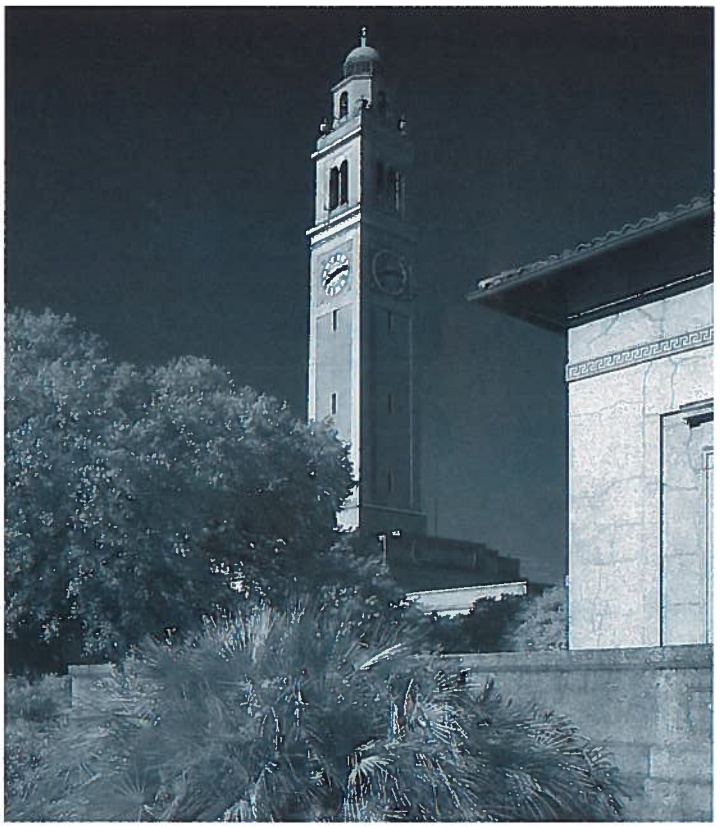
DAVID LOHSE
Topic: The Role of Chain Packing in Polyolefin Rheology and Mixing
Exxon Research and Engineering Co.
Hosted by: Maciej Radosz
Friday, September 3, 1999

WILLIAM L. OLBRICHT
Topic: The Fluid Mechanics of Liquid-Filled Capsules
School of Chemical Engineering
Cornell University
Hosted by: Karsten Thompson
Friday, October 8, 1999

NITASH BALSARA
Topic: Early Stages of Nucleation in Polymer Mixtures
Department of Chemical Engineering
Polytechnic University, New York
Hosted by: Mac Radoscz
Friday, November 5, 1999

CHRISTOS TAKOUDIS
Topic: Process-Property Relationships in Novel Ultrathin Films in Microelectronic Materials Processing
Department of Chemical Engineering
University of Illinois, Chicago
Hosted by: Gregory Griffin
Friday, November 12, 1999

BABATUNDE A. OGUNNAIKE
Topic: Model-Based Control of Particulate Processes
E. I. DuPont de Nemours and Company
Hosted by: Michael Henson
Friday, November 19, 1999



Department Hosts Two Lectureship Speakers

The Chancellor's Distinguished Lectureship Series are made possible by the generous gifts of private donors with the express purpose of enhancing LSU's research and scholarly image. The series support the visits of renowned scientists from other institutions, from both the U.S. and abroad, to share their research with the LSU community. Our department was fortunate to be the host of the following two speakers as part of the 1999 lectureship series:

JAMES J. MORGAN, who is the Marvin Goldberger Professor of Environmental Engineering and Science, visited LSU between October 6 and 8, 1999. His visit was cohosted by Louis Thibodeaux, Kalliat Valsaraj, and Danny Reible. Morgan spoke on the topic of particle interactions in water. He is a member of the National Academy of Engineering and was the founding editor of *Environmental Science and Technology*, the premier journal in environmental science and engineering. He is well known throughout the world for his book *Aquatic Chemistry*, which he coauthored with Werner Stumm. The book is presently in its third edition.

MATHEW TIRRELL, who is the Auhill Professor and Dean of Engineering at the University of California, Santa Barbara, spoke about "Creating Functional Biomolecular Architectures on Surfaces." He visited LSU on November 19, 1999. Maciej Radosz was the primary host for Tirrell's visit. Tirrell is a member of the National Academy of Engineering.

Expanding Knowledge

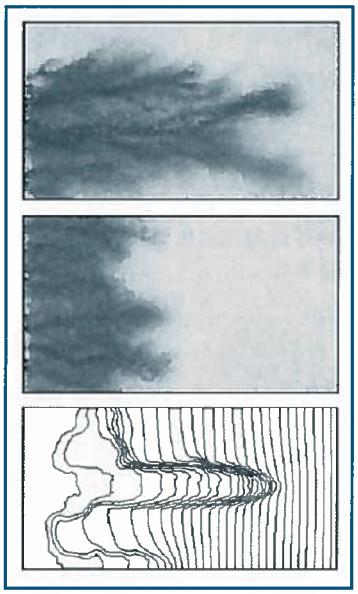
Thompson Explores Reaction and Flow in Porous Media

Assistant Professor KARSTEN THOMPSON joined the ranks of the Gordon A. and Mary Cain Department of Chemical Engineering in 1996, after finishing his Ph.D. work at the University of Michigan. At LSU, he has begun a research program in flow and reaction in porous media, which enables him and his graduate students to pursue a variety of engineering problems.

Their research on subsurface transport will lead to better tracking and the removal of contaminants in the environment, and the developing of chemical treatment strategies and advanced computer models for oil production that will help ensure that future reserves can be tapped. The new modeling techniques Thompson is exploring are changing how modern materials are designed and manufactured.

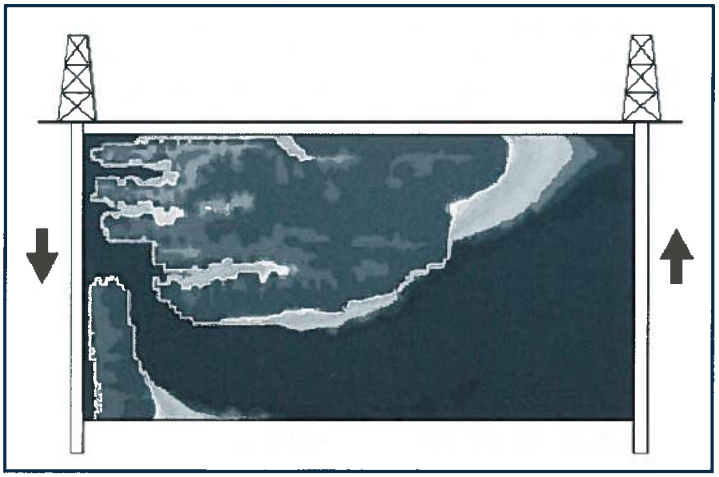
The overriding theme that interests Thompson and his group is the role that natural heterogeneities play at both small and large scales. Thompson explains that, with few exceptions, porous materials have inherently disordered structures and that the interplay between this disorder and physical and chemical dynamics creates rich and challenging research problems.

Much of the research carried out in Thompson's lab will ultimately be applied to improving oil recovery techniques, technology that hits close to home in Louisiana, a state that has a long history of oil production. Specifically, Thompson is focusing on problems that are readily attacked from a chemical engineering perspective, such as modeling reactive flows and developing better polymer treatments for the oil field.



EXPERIMENTS SHOWING UNSTABLE VERSUS STABLE REACTIVE FLOWS (TOP TWO IMAGES). SIMULATION OF PRESSURE RESPONSE HELPS EXPLAIN STABILITY (BOTTOM IMAGE).

While industry research on advanced production techniques has slowed during recent years because of inexpensive oil, engineers believe that we must continue to develop technologies such as polymer treatments, especially as the world's most accessible reserves become depleted. Tony Kwon (M.S. chemical engineering, 1998), one of Thompson's first graduate students, began work in this area by examining viscous instabilities that occur during the cross-linking of polymer gels.



NUMERICAL SIMULATION SHOWING THE INJECTION OF A CROSS-LINKING POLYMER INTO A HETEROGENEOUS OIL RESERVOIR.

Honggao Liu, a current Ph.D. student, is using experimental and computational studies to understand how polymers alter the morphology and multiphase permeability of a reservoir. He is adapting algorithms for reactor modeling for use in large-scale reservoir simulators, which will allow the modeling of certain flow and reaction dynamics that are not yet understood. A related project (in the development stage) will help improve production from artificially fractured reservoirs.

One of the common threads to all of these research problems is the issue of scale-up: how one can analyze microscopic behavior (for instance, the alteration of surface chemistry in the pores of a sandstone) so as to better predict behavior over much larger distances. Mathematically, this problem becomes especially important in the discrete-to-continuum transition (which is usually somewhere around 1,000 microns). The problem boils down to how one can translate equations from the microscale perspective (where the fluid mechanics are described within tortuous interconnected passages) to the bigger picture in which the porous medium is viewed as a bulk material.

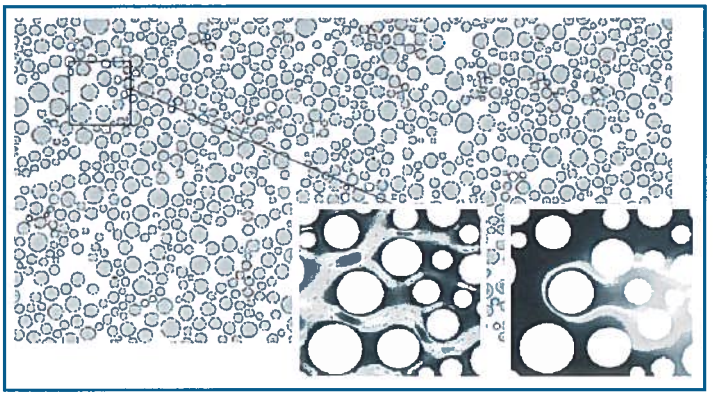
Thompson's interest in these so-called up-scaling techniques began with his graduate work, and research is being carried on by Guangli Liu, who is using powerful computer algorithms to zoom in even closer than before. While traditional algorithms can be used to quantify flow at the pore scale, Liu is obtaining detail at the streamline or molecular level.

From these high-resolution models one can examine velocity distributions or shear stresses within single pores, while simultaneously accounting for behavior occurring many pore distances away. Ultimately this research will help answer questions about where bacteria attach and grow during bioremediation or how polymer molecules flow in nonuniform shear fields.

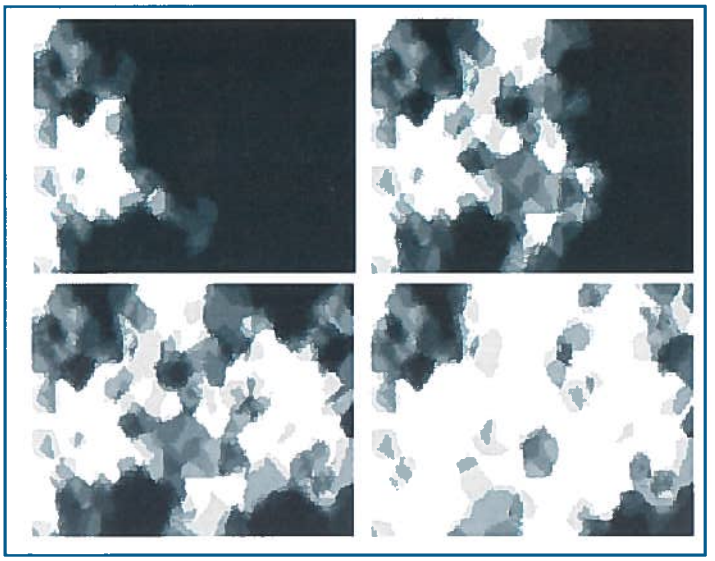
A more unusual application of these computational modeling techniques is for superadsorbent fibers, an application that stems from a collaborative project with Kimberly-Clark Corporation. Addressing the radical differences in morphology between fibrous structures and granular materials has pushed Thompson's research in new directions, primarily because traditional computational methods have been developed for granular materials. Fibrous materials, in contrast to granular materials, can exhibit very high porosities, and are composed of long, slender particles.

One of Thompson's novel approaches is to use Voronoi diagrams to mimic the complex structure of these fibrous materials. These geometric mappings are a powerful tool that allow certain types of disordered structures to be transformed into tractable mathematical domains. Modeling fluid flow within these networks is equally challenging; current work includes simulations to understand the delicate balance between gaining computational efficiency without losing important physics in the problem.

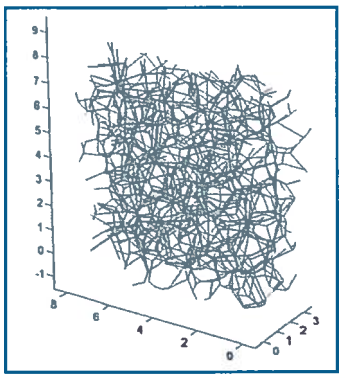
The other major component of Thompson's research program is the effect of contaminant transport on the environment, which unfortunately has become a pressing problem worldwide. A variety of fundamental problems can arise when studying these transport problems, many of which have analogues in more traditional chemical engineering. For instance, in cases where contaminants are organic-phase liquids, one must quantify interfacial mass-transfer rates (from the contaminant phase to the groundwater) for successful modeling.



MODEL OF A MICROSCOPICALLY DISORDERED MATERIAL. INSETS SHOW DETAILED VELOCITY AND MASS TRANSFER BEHAVIOR IN A SMALL REGION OF THE MATERIAL.



3-D VORONOI DIAGRAM USED FOR MODELING DISORDERED FIBROUS MATERIALS.



NUMERICAL SIMULATION OF FLUID DISPLACEMENT IN A FIBROUS MATERIAL. IMAGES ARE SEQUENTIAL, SHOWING AIR DISPLACING WATER FROM THE LEFT SIDE.

Empirical correlations for mass transfer are quite successful in many instances, but can break down when various types of heterogeneities become important. Thompson's first Ph.D. student, Gang Guo (now at Ford), focused on this behavior at the pore scale, studying how interfacial dissolution is affected by nonuniform hydrodynamics very near the interface.

A second project has just begun in collaboration with LSU's Kalliat Valsaraj and Danny Reible. The project will examine the subsurface transport of stabilized oil emulsions called polyaphrons. It is hoped the results of these experiments may someday be used in the remediation or delivery of chemical species deep into a contaminated reservoir.

One of the most enjoyable aspects of Thompson's job is the chance to bring cutting-edge engineering problems into the classroom and, conversely, to bring ideas learned from teaching into research problems. Thompson explains that preparing for lectures and interacting with students has helped provide insight into many of his research problems. He has enjoyed student interaction at all levels since coming to LSU, teaching numerical methods to sophomores, fluids to juniors, math modeling to seniors, and transport and fluid mechanics to graduate students. He has also worked with five graduate students and has been the AIChE student-chapter adviser since coming to LSU. You can visit his website via the department's homepage or at www.che.lsu.edu/faculty/thompson

Faculty News

KERRY M. DOOLEY has been acting as the faculty adviser for the undergraduate laboratory since 1998. Recently he has been instrumental in helping to propose upgrades for the lab. The new additions to the lab will provide control systems for the largest of five experiments.

MICHAEL A. HENSON recently was bestowed the James McLarin Shivers Professional Development Professorship. Henson composed an article for *Computers in Chemical Engineering* titled "Nonlinear Model Predictive Control: Current Status and Future Directions." He is continuing his research with a grant from the National Science Foundation (NSF) to study the optimal membrane system design for multicomponent gas separations. Presently he is a member of the Graduate Application Review Committee, an adviser for undergraduate students, coordinator for the departmental seminar series, and coordinator for graduate recruiting.

ELIZABETH PODLAHA was bestowed the Clarence M. Eidt Professional Development Professorship and was also featured on the cover of the *Louisiana State University: Research, Graduate Studies, and Economic Development* brochure. Podlaha won the prestigious NSF Career Award this year. This award will be used to support her research activities in nanocomposite electrodeposition of thin films and high aspect ratio deposits. In 1999 she also obtained a research grant from the Louisiana State Board of Regents Research Development program.

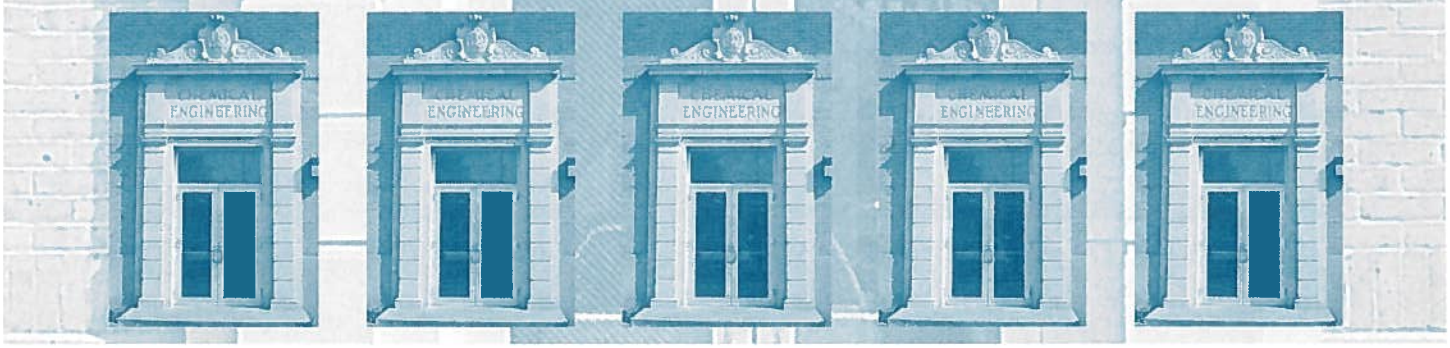
GEOFFREY L. PRICE is featured on the new CAMD videotape created for University public relations efforts. He also presented a paper, titled "Reductive Solid-State Ion-Exchange in Zeolites: Discovery, Characterization, and Catalysis," in September 1999 at the Exxon Research and Development Labs.

MACIEJ RADOSZ's work over the past year included presentations at the University of Southern Mississippi's Department of Polymer Science, The Dow Chemical Company in Freeport, Texas, and the AIChE Annual Meeting in Dallas, Texas. Radosz has also been invited to present lectures at the Aspen World 2000 Conference and the Third U.S.–China Joint Chemical Engineering Conference in Beijing for the year 2000.

DANNY D. REIBLE was named to the National Research Committee on Remediation of PCB Contaminated Sediments. He presented papers at conferences for ACS, AIChE, SETAC, WEFTEC, EPA, HSRC, and other national conferences. He coauthored a new book titled *Diffusion Models of Environmental Transport*, which was published in October 1999. On a more personal note, Reible dedicated two weeks of his summer as an adult leader for a teenage Christian performing group called "Lifegivers." The group traveled by bus through many states including Texas, New Mexico, Colorado, and Kansas.

LOUIS J. THIBODEAUX spent some time in Amman, Jordan, this summer when he was invited by Kamel Qaisi, once a visiting professor at LSU and now serving as Jordan's newly appointed director of the Environmental Protection Agency. During his visit to Jordan, Thibodeaux offered technical aid for industrial hazardous waste problems. His visit began an attempt to turn around the negative results of infrastructure development on the environment in that country.

KALLIAT T. VALSARAJ was awarded the Ike East Professorship in Chemical Engineering. His impressive list of publications includes two books, the most recent of which will be released in 2000, titled *Elements of Environmental Engineering: Thermodynamics and Kinetics* (second edition). Valsaraj has recently received a new grant to study the applications of photocatalysis in the treatment of dilute wastewater streams.



Student News

ChE Student Recognized with Award

The senior award from the Phi Eta Sigma National Honor Society for spring 1999 went to **Lanny Michael Smith**, who graduated with a Bachelor of Science degree from our department during the May 1999 commencement.

Department of Chemical Engineering Undergraduate Scholarships, 1999–2000

Christian P. Aucoin	*Gerald Family Scholarship*
Matthew T. Balhoff	*Gerald Family Scholarship*
Dwight P. Bordelon	*O. Dewitt Duncan Scholarship*
Christopher J. Burke	*Frank & Clara Groves Scholarship*
Laura H. Castile	*Chemical Engineering Scholarship*
Louis O. Chemin III	*Texaco Scholarship*
Jeremy D. Cyr	*Texaco Scholarship*
Robert K. Damon	*Chemical Engineering Scholarship*
Rusty J. Dauzat	*B.P. Amoco Scholarship*
John A. DiZinno	*Chemical Engineering Scholarship*
Burl W. Duffie	*Gerald Family Scholarship*
Craig A. Earnest	*Chemical Engineering Scholarship*
Shannon L. Frith	*Marathon Ashland Scholarship*
Jeremy L. Goebel	*Chevron U.S.A. Production Scholarship*
Travis C. Lane	*Texaco Scholarship*
Rebecca J. Lorenz	*Gerald Family Scholarship*
Darren J. Marchal	*William E. McFatter Scholarship*
Jeff D. Maynor	*B.P. Amoco Scholarship*
Byron F. McCaughey	*Gerald Family Scholarship*
David S. McGraw	*Marathon Ashland Scholarship*
Carolyn A. Melton	*Gerald Family Scholarship*
Melanie B. Mitchum	*Gerald Family Scholarship*
Annette A. Murnane	*I. H. Gottlieb Memorial Scholarship*
Dianna L. Pourciau	*Chemical Engineering Supplement*
Kristin D. Rabalais	*O. Dewitt Duncan Scholarship*
Barry M. Rogge	*Marathon Ashland Scholarship*
Anthony S. Rotolo	*O. Dewitt Duncan Jr. Scholarship*
Scott M. Steady	*Chevron U.S.A. Scholarship*
Benjamin P. Templet	*Chemical Engineering Scholarship*
Katherine C. Toney	*Gerald Family Scholarship*
Christopher F. Yandell	*Vulcan Chemical Scholarship*

Summer 1999 Commencement

MASTER OF SCIENCE IN CHEMICAL ENGINEERING

Amy Breaux
Darlene Lambert
William Vidrine

DOCTOR OF PHILOSOPHY IN CHEMICAL ENGINEERING

Yiding Zen
Bijan Seyfzadeth

December 1999 Commencement

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Douglas C. Arceneaux
Truman A. Breithaupt
Ashanta V. Brown
Jeremy D. Cyr
Burl W. Duffie
Emily S. Hebert
Jonathan S. Howell
Nidal Issa
Jason M. Matlosz
Phuong D. Nguyen
Thomas T. Sands
Martin O. Tate

MASTER OF SCIENCE IN CHEMICAL ENGINEERING

Sandeep Randery

DOCTOR OF PHILOSOPHY IN CHEMICAL ENGINEERING

Hertanto Adidharma
Ka Chun Chan
Nageswara Pobbathe

Alumni News

If you would like for us to print news of your latest achievements, please complete the enclosed postage-paid card and return it to us—we'd love to hear what you've been doing! If you prefer, this information can also be submitted electronically to ***knopf@che.lsu.edu*** *or through our department web page,* ***www.che.lsu***

1940s

James "Jimmy" D. Brown *(B.S. '42),* although retired, works in real estate management and enjoys traveling and skiing.

Richard W. Waldsmith *(B.S. '48)* is recently retired and now enjoys working as a volunteer for the Executive Service Corps of Louisiana.

1950s

Grover L. Dobbins *(M.S. '57)* retired from LaRoche Chemicals in 1994. He now enjoys spending his time traveling, volunteering with church work, and participating in outdoor activities.

Marc F. Fontaine *(M.S. '51)* retired from a career with Texaco in 1993, and now keeps busy with travels abroad, his computer, and his friends. He and his wife, Dorothy, recently celebrated their golden anniversary.

1960s

John D. Donahue *(B.S. '60)* is working for Fine Chemicals at the BASF corporate headquarters where he was recently named director of purchasing. He resides in Randolph, New Jersey.

James L. Kelly *(Ph.D. '62)* taught nuclear engineering for 35 years at the University of Virginia. He is now retired and spends his time working on his farm in Keswick, Virginia, where he and his wife reside.

Robert E. Osborne (B.S. '62) served as senior project manager for Eastman Chemical Company. In 1999, he saw the complete construction of a major facility for Eastman Chemical Company in Singapore. After 37 years with the company, he retired in December 1999.

1970s

Armand S. Abay (B.S. '76) currently works for Motiva Enterprises LLC, in Convent, Louisiana, as a refinery manager. He is living in Baton Rouge, Louisiana.

Luis R. Canas *(B.S. '75)* is working as a chemical engineer for Westinghouse Savannah River Company in Aiken, South Carolina. He has been providing technical support to chemical-nuclear operations for the Savannah River Site for 11 years. He enjoys visiting LSU whenever he is in Louisiana on business or personal travel.

Michael L. Junker *(M.S. '77)* is serving as supervisor of a process improvement group at Copolymer Rubber & Chemical Company. He currently resides in Baton Rouge, Louisiana.

James R. Madden *(M.S. '74)* is currently working for Origin Technology in Business, Inc., as a SAP R/3 consultant in the functional modules of plant maintenance, warehouse management, project systems, and a little material management. He resides with his wife, Daphne, in Baton Rouge, Louisiana. He is also an adult leader with the Boy Scouts of America in the Istrouma Area Council (IAC) and a volunteer with the Louisiana Capital Area Chapter of the American Red Cross in First Aid and Disaster Services. He and his wife recently received the Silver Beaver award from the IAC for service to youth at the council level.

Bridget Burr Myers *(B.S. '79)* resides in Lafayette, Louisiana, where she is a homemaker.

1980s

Mark Malhiet *(M.S. '89)* is working as a process-design engineer. He and his wife, Anne, currently reside in Germany.

Samuel Mistretta *(B.S. '89)* works as a research specialist in chlorinated organics process research at Dow Chemical in Plaquemine, Louisiana. He recently received a special achievement award for his work in 1999.

Nhuan (John) P. Nghiem *(Ph.D. '85)* is currently working with Oak Ridge National Laboratory in Oak Ridge, Tennessee, as a research biochemical engineer.

Troy De Soto *(B.S. '89)* is currently employed with Albermarle and working at their office in Brussels, Belgium.

Chris Williams *(Ph.D. '87)* is working as a senior refinery technologist for the Shell Refinery at Petit Couronne in Normandy. He is in charge of crude distillation, hydrogen production, platforming, hydrotreating, and sulphur recovery. After spending eight years in Amsterdam, Williams mastered the Dutch language. He is now working in France and speaking French.

1990s

Amy E. Breaux *(M.S. '99)* is employed by TRW as a systems engineer II for the Guidance Integrated Product Team. She is a battery engineer specializing in maintenance and sustainment of InterContinental Ballistic Missile AVE batteries. She married William Vidrine in January 2000. She has kept busy with numerous projects including designing their new home, snow skiing, hiking, traveling, and participating in the Electrochemical Society.

Anne Williams Jordan *(B.S. '94)* currently resides in Mobile, Alabama. She became a mother on May 13, 1999, with the birth of her son, Ross Edward Jordan. She is taking time off from work to be a mom.

Alicia C. Butler *(B.S. '99)* is a recent graduate of the Department of Chemical Engineering. She is employed by Monsanto Chemical Company in Luling, Louisiana, where she works as a process/project engineer for the conventional tech unit that produces the amine salt that becomes the weed killer Roundup. Her focus is mainly on projects to benefit the process as a whole from both a production and safety standpoint.

Stephen L. Mason *(B.S. '92)* is an advanced process control and optimization engineer for Lyondell Citgo Refining Co. in Houston, Texas. He recently moved to Houston with his wife, Jeannie. They are still avid LSU fans and make the trip back to Baton Rouge for all of the Tigers' home games.

Rakshay R. Shah *(B.S. '97)* is working as a production engineer in a ethylene production unit at The Dow Chemical Company's Plaquemine, Louisiana, site. He is also participating in LSU's part-time evening MBA program and spends his free time playing golf.

Brian Swift *(M.S. '94)* is living in Shelbyville, Indiana, where he works as an R&D chemist for Binders. He and his wife, Annick, spend their leisure time on their horse farm located just outside of Indianapolis.

Amy MacEwen Therrien *(B.S. '96)* is currently working as a styrene engineer for Dow Chemical in Freeport, Texas.

Robert C. Wight, Jr. *(M.S. '99)* works for Engineered Polymer Solutions as a plant engineer in Los Angeles, California. He and his wife, Andrea, recently became parents with the birth of their son, Robert "Robbie" Cleve Wight III.

LOUISIANA STATE UNIVERSITY
Gordon A. & Mary Cain Department of Chemical Engineering
Baton Rouge, LA 70803-7020