From the Dean

Each new academic year brings with it a surge of energy to campus. In the College of Science, we measure our energy in units of students—they’re our joules (jewels)! We welcomed 975 freshmen to the College this semester, raising our total undergraduate enrollment to nearly 2,800. There was a corresponding increase in graduate students as well. I’m looking forward to meeting many of our students and their parents at this year’s Family Day reception on Saturday, September 10.

Nothing can prepare students better for dealing with today’s ever changing world than a Science education. To fulfill that promise, our faculty must continually evolve what and how we teach. I’m pleased to report that our August 16 workshop on Undergraduate Education was well attended and very productive. We reviewed the six desired outcomes of a Science education—as determined last Spring with substantial input from students, staff, and alumni—and discussed ideas for courses and experiences to deliver those objectives. We’re now putting together proposals for ultimate implementation.

In terms of new faculty, I’m happy to report that we’ve just completed our most successful recruiting year ever, welcoming 31 exceptional new faculty members to the College of Science. We’ll be featuring them in this and future issues of Science @ Purdue. Please bear with us; it will take many months to introduce them all!

One of the big attractions of Purdue to our incoming faculty and students is Discovery Park. Its centers provide a rich multidisciplinary setting to address some of society’s most challenging problems and opportunities. Thanks to a new $25 million gift from Lilly Foundation, four new Discovery Park centers have recently been inaugurated: the Center for the Environment, the Oncological Sciences Center, the Energy Center, and the latest center announced just two weeks ago, the Cyber Center (see the article in this issue).

While we begin the year with so much promise, let’s remember...
New Orleans, my heart goes out to all those who have lost loved ones or have to put their lives back together. I’m so thankful that my own family members are safe. Purdue has inaugurated a variety of programs to assist displaced students and families, which are described just below. I encourage everyone to donate to reputable relief efforts and help restore hope.

Best regards,

Jeff Vitter

University to aid students affected by Hurricane Katrina

Purdue University student groups, academic and administrative areas, and housing units have launched a broad initiative to offer relief to victims of Hurricane Katrina.

Purdue officials on Friday, Sept. 2 offered immediate admittance to academically qualified students wishing to transfer from Louisiana, Mississippi or Alabama institutions forced to suspend operations because of the hurricane. Meanwhile, student volunteers from about a dozen groups are leading campuswide efforts to raise money to be donated to hurricane relief through the Lafayette, Ind., chapter of the American Red Cross.

Although Purdue undergraduate housing spaces are at capacity for the fall semester that began on Aug. 22, available spaces in graduate and family housing facilities will be temporarily offered at no charge to the families of Purdue students from the hurricane-damaged areas and to high school seniors from the affected regions who enroll in the West Lafayette, Lafayette or Tippecanoe County school systems. Those on-campus housing spaces will be available through the summer of 2006. Full story.

SPOTLIGHT ON NEW FACULTY

The first five faculty we spotlight are all COALESCE hires: two in membrane science, one in computational science, and two in massive data.

Ruben Claudio Aguilar, Assistant Professor, Biological Sciences. Claudio seeks to understand how diseases begin by studying the way various chemical substances move across membranes. He received his Ph.D. in biochemistry from the University of Buenos Aires and held a postdoctoral fellowship in membrane biophysics at the National Institutes of Health.
Johns Hopkins University, where he had been an associate research scientist.

**Amy Davidson**, Associate Professor, Chemistry. Amy uses molecular, biochemical, and biophysical methods to study an ATP-Binding Cassette (ABC) transporter. ABC genes represent the largest family of transmembrane proteins and are responsible for several human diseases including cystic fibrosis, hyperinsulinemia (abnormally high levels of insulin in the blood), and macular dystrophy. She received her B.S. from Tufts University and the Ph.D. from Cornell. She was most recently a postdoctoral research associate at UC Berkeley.

**Maarten de Hoop**, Professor, Mathematics and Earth & Atmospheric Sciences, and Director of Center for Computational and Applied Mathematics (CCAM). Maarten has formed a mathematical geophysics program to develop a new generation of imaging, inverse scattering, and tomography methods for the study of Earth’s interior—of great interest to energy companies engaged in oil and gas exploration. Maarten received his B.S. in Physics with Mathematics and Astronomy and an M.S. in Theoretical Physics from the University of Utrecht, the Netherlands. He received his Ph.D. in Technical Sciences from Delft University of Technology, the Netherlands. He comes to Purdue from the Colorado School of Mines, where he was Co-Leader of the Center for Wave Phenomena in the departments of Mathematical and Computer Sciences.

**Patrick Eugster**, Assistant Professor, Computer Science. Patrick's research in distributed programming addresses the implementation of transactions among multiple computers. With his techniques, software developers can more easily build programs that communicate reliably over the Internet, even if some computers are overloaded, unreliable, or temporarily unavailable. Patrick received his Ph.D. and M.S. in computer science from the Swiss Federal Institute of Technology in Lausanne, Switzerland (EPFL). He comes to Purdue from Sun Microsystems, Switzerland, where he was a senior software architect.

**Guy Lebanon**, Assistant Professor, Statistics
Guy's primary research interest is statistical machine learning, an area of artificial intelligence concerned with teaching computers to “learn.” It has a wide spectrum of applications to search engines, human/computer interactions, image analysis, medical diagnosis, detecting credit card fraud, stock market analysis, classifying DNA sequences, speech and handwriting recognition, game playing, and robot locomotion. Guy received his B.A. and M.S. degrees in computer science from Technion, Israel Institute of Technology, and the M.S. and Ph.D. degrees in computer science from Carnegie Mellon University.

SCIENCE PEOPLE

Spafford says national cyber security spending must increase

At a July 26 Capitol Hill briefing, CERIAS Executive Director and member of the President's Information Technology Advisory Committee (PITAC) Eugene Spafford forecasted a grim future for national cybersecurity. Spaf predicted a growing threat from organized crime, more incidents of identity theft, national level incidents, and a major drain on the economy. Full story.

Kissinger new interim leader of Inproteo

An industry-university consortium formed to develop and commercialize proteomics tools in Indiana has named Peter Kissinger, Professor of Chemistry, its top interim executive. Pete, who is founder and CEO of Bioanalytical Systems Inc., will become interim CEO of Inproteo, the commercial name for the Indiana Proteomics Consortium LLC. Full story.

Emeritus professor still challenging students

Throughout his outstanding career, David Moore, Professor Emeritus of Statistics, enlivened the world of statistics for his students. David is still pushing his students to excel, this time with a personal gift to the Shanti S. Gupta Fund that he challenges.
**SCIENCE NEWS AND RESEARCH**

**New Purdue center to speed cyber innovation**

Computer Science Professor Ahmed Elmagarmid will serve as acting director of Purdue’s new Cyber Center, announced on August 18. The new Discovery Park center will unite computer resources at all of Purdue’s campuses, which will enhance research and education, set the stage for more federal funding, and ultimately boost Indiana’s economy. [Full story.](http://c89.science.purdue.edu/sites/enewsletter/september2005/)

**Computer Science researcher plays with Internet worms**

Internet worms are becoming increasingly sophisticated and stealthy. In response, CERIAS researchers including Prof. Dongyan Xu have partnered with Microsoft to create a worm playground: a safe, convenient environment where Internet worms can be unleashed and observed. [Full story.](http://c89.science.purdue.edu/sites/enewsletter/september2005/)

**Donuts and directions calm first-day jitters**

Science deans and staff set up tables outside the Math Sciences building on the first day of classes and handed out fruit, water, donuts, and directions. Staffers pointed the way to classrooms and helped confused students navigate all those red brick buildings.

**Science reaches out at the Indiana State Fair**

Between trips for corn dogs and elephant ears, fairgoers sampled a taste of Science fun during Purdue Day at the Indiana State Fair on August 17. Members of the Science...
visitors everything from statistics games of chance to tornado tubes—and demonstrated some of the practical values of a strong science education.

**Purdue News**

**Office of Engagement offers money for student service projects**

The Community Service Student Grant Program, facilitated by Purdue’s Office of Engagement, provides grants to Purdue students or student organizations for community service projects. Grant amounts range from $100-$1500. [More information.]

**Purdue’s High Tech Job Fair matches students with Indiana companies**

More than 1,000 Purdue students hope to launch their careers at Purdue’s High Tech Job Fair for Indiana Companies. At the eighth annual fair on October 26, Purdue’s Technical Assistance Program will match students with prospective degrees in technology, science, engineering, management, and agriculture to Indiana companies with high-tech job openings. More than 60 companies from throughout Indiana are expected to attend the event. [Full story.]

**Orientation to offer research tips for new faculty**

The annual New Faculty Research Orientation, sponsored by the Office of the Vice President for Research, is scheduled for September 14. The event provides an overview of all aspects of Purdue’s research grants/contracts process for new faculty members. The deadline for registration is Thursday, September 8. [More information.]

**Science Events and Calendar**

**Computer Science Intel Distinguished Lecture and Dedication of the Intel Network and Security Lab, September 8**

20th Anniversary celebration of Actuarial Science Club, September 9, 6:00 p.m., Purdue Memorial Union South Ballroom

**Family Day, September 10**
College of Science Scholarship Celebration, September 10, 8:30 a.m., Science Tent, Math Sciences Bldg.

Football, Purdue vs. Akron, September 10

PAA Tailgate at the Arizona Game, September 17

Computer Science Corporate Partners Meeting, September 19-20

PAA Tailgate at the Minnesota Game, September 24

Big 10+ Graduate School Expo, September 26

College of Science Dean’s Leadership Council meeting, October 6-7

Chemistry Symposium honoring Prof. Pete Kissinger, October 6-7

Science Alumni Board meeting, October 14

Homecoming, October 15

Next Generation Telecommunications: Demand Side Strategies, October 25

Department of Earth and Atmospheric Sciences birthday celebration and alumni gathering in honor of Professor Bill Hinze, November 4-5

Science Women of Purdue meeting, November 11

Science Events

Science Seminars

Purdue Events

**SCIENCE ALUMNI NEWS**

Science alumni: We want to hear from you! Update your information and share your professional news as well as your personal and family milestones with your classmates and the Science community. [Click here.](http://c89.science.purdue.edu/sites/енewsletter/september2005/)

Click here for this month’s Alumni News.

**Who was your favorite Science professor?**

Related Searches: Mathematics Resources | Online
Was it a math professor who challenged you to succeed? Was it a chemistry professor who helped you through CHM115? Was it a physics professor who set you on the road to grad school? Vote for your favorite Science professor by sending email to news@science.purdue.edu. Please be sure to include your name, major and year of graduation.

President's Council members can become students for a day

President’s Council members: Join us for Back-to-Class, Friday, October 7. Don’t miss this unique educational opportunity available only to President’s Council members! This year’s curriculum features 23 different sessions taught by Purdue’s top professors and instructors, including Prof. Larry Braile and Prof. Phil Low.

For more information on President’s Council Back-to-Class, contact events@purdue.edu.

Stay connected!

Join the Purdue Web Community and stay connected to your alma mater. This interactive site will help you keep in touch with your Purdue family—your friends, faculty and staff, and fellow alumni. Click here to sign up and get started.

RESEARCH FUNDING REPORT

Science researchers received funding totaling more than $3.8 million in July 2005. Complete list of funded proposals.