



configurations

July 2011

A newsletter of the Department of Computer Science and Engineering at the University of Notre Dame



IN THIS ISSUE

- Commencement 2011
- Wireless Institute Announces Winners
- CSE Students Participate in Bengal Bouts
- Grad Student Top Ten Viewed
- First Source Award
- Lussier Receives NSF Award
- Chen Receives Grant
- Ortiz Wins Second Place in National Security Innovation Competition

Commencement 2011

The Department of Computer Science & Engineering (CSE) graduated 26 students on Sunday, May 22, 2011. A departmental ceremony was held in the afternoon and attended by the graduates, their families, and CSE professors. This year's faculty speaker, selected by the students, was Professor **Danny Chen**. Schubmehl-Prein Professor **Kevin W. Bowyer**, the department's chair, served as master of ceremonies. The ceremony was organized and coordinated by seniors **Anne Flinchbaugh** and **Matthew Drummond**, with the help of Administrative Assistants, **Ginny Watterson** and **Dian Wordinger**.

This year's Outstanding CPEG Senior recipient was **Anne Flinchbaugh** and the Outstanding CS Award recipients were **Greg Angle** and **Evan Lent**. Flinchbaugh also received the IEC William L. Everitt Award.

Seniors **Anne Flinchbaugh**, **Erich Wolz**, and **D. Matt Momont** comprised one of the two teams that shared first-place for the Advanced Database Projects Competition held in Spring of 2011, sponsored by the Thomas Meurer Endowment Fund for Excellence. The winners were students enrolled in CSE 40746: Advanced Database Projects taught by Professor Ramzi Bualuan and studied topics such as database design, development and management.

The Outstanding CSE Faculty Teaching Award selected by the students was awarded this year to Professor **Nitesh Chawla**.

The College of Engineering Outstanding Teacher award was given to Professor **Ramzi Bualuan**.

Most of our grads are planning to take a position in industry. Four are planning to pursue graduate degrees: Anne Flinchbaugh at UT – Austin, Sean McMillan at University of Michigan, Jake Lussier at Stanford, and Stephen Siena at Carnegie-Mellon.

Students receiving their degrees at this ceremony were **Gregory Angle, Joseph Choi, Natalie Dehen, Brian Dentino, Matthew Drummond, Anne Flinchbaugh, Dominic Golab, Ryan Jansen, Donald Kafka, Matthew Kaufmann, Connor Keenan, Stephen Lagree, Evan Lent, Jake Lussier, Sean McMillan, David Momont, Thomas Mueller, Michael Murray, Nicholas Myers, Colton Ortolf, Robert Pacione, Alexander Pelan, Stephen Siena, Patrick Smyth, Rachel Witty, and Erich Wolz**.

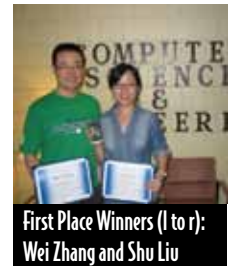


Wireless Institute Announces Winners in Mobile Application Development Contest

Mobile solutions for challenges in energy, environment and sustainability was the theme of the first “Mobilize Your Ideas!” contest, organized by the Wireless Institute, in collaboration with the Notre Dame Energy Center and the Academic Technologies Lab at Notre Dame. University students, staff, faculty and alumni were invited to design and implement innovative solutions using mobile technologies. Almost 50 participants registered, ultimately leading to seven finalists competing using platforms such as iPhones, Android smartphones and tablets. The contest was organized by CSE professors **Christian Poellabauer**, **Patrick Flynn**, and **Aaron Striegel** and CSE Ph.D. student, **Nikhil Yadav**.

This competition was sponsored by the Motorola Foundation, through an “Innovation Generation Grant”, and the University of Notre Dame. The Motorola Foundation’s goal is to engage students in a corporate-led initiative to cultivate widespread literacy in science, technology, engineering and math (STEM) through educational programs, community activities and hands-on competitions, well aligned with Notre Dame’s mission.

First Place Winners were CSE graduate students, **Shu Liu** and **Wei Zhang** who developed an Android application called GreenDrive. GreenDrive helps users track their vehicle carbon footprint and provides some suggestions to reduce the carbon emission.



James Gentile (CSE grad student), **Mark Easley** (CSE Undergrad), **Cameron Harvey** (Physics grad student) and **Samuel Rund** (Biological Sciences grad student) developed an Android application called BusMinder that took the second place prize. The BusMinder application provides riders with the live location of public transportation busses.



Two teams tied for third place. **Brian Kachmark** (CSE Junior) and **Andrew Plaska** (College of Science Junior) developed a web based community called Locate Green. **Dirk Van Bruggen** (CSE grad student) created an application titled, RideShare, based on the motivation that many students at Notre Dame live in the same areas and all drive their own vehicles to campus every day.

CSE Students Participate in Bengal Bouts 2011

CSE had five students who participated in the **Bengal Bouts** for 2011, a boxing tournament to raise donations for the Holy Cross Missions in Bangladesh to fund schools (primary education through the college level) and health care. In 1931, Coach Dominic “Nappy” Napolitano started the Bengal Bouts, the charity tournament for the Holy Cross Missions. Over 81 years, the mission has donated over \$1 million dollars. This year the 190 participants will raise over \$100,000.



We are proud of (pictured left to right) **Andrew Ofsonka**, **Steven Kraska**, **Dominic Golab**, **Sean Cogan**, and **Gregory Reilly** who participated in this worthy cause.

Brockman and Kogge Receive 1st Source Commercialization Award

Jay Brockman and **Peter Kogge** are recipients of the inaugural 1st Source Commercialization Award, worth \$20,000. Along with Ed Upchurch of CalTech, they have done an outstanding job in ideating the products of EMU Solutions and moving them towards commercialization.

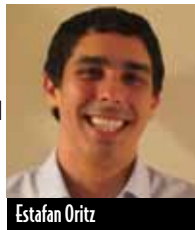


Emu Solutions is pursuing the development of solutions to the “bottleneck” between memory and processor on modern computers. Emu was founded in 2004, and builds on patents that Kogge and Brockman received on their research work at Notre Dame.



Estefan Ortiz Wins Second Place in National Security Innovation Competition

Ph.D. student **Estefan Ortiz** won the \$5,000 second-place prize in the 2011 National Security Innovation Competition sponsored by the National Homeland Defense Foundation. In the first stage of the competition, 25 entrants were narrowed to 10 finalists. The ten finalists received formal review feedback on their submission, which they could use to structure the content of their presentation for the second stage judging. In the second stage, the 10 finalists presented their work in person to a team of evaluators for judging. This second stage was held in Colorado Springs on April 29.



Estefan's presentation was titled "Dilation Aware Multi-Image Enrollment for Iris Biometrics". This work addresses the problem of decreased recognition accuracy for iris biometrics when the images being compared have a substantial difference in pupil dilation.

Estefan Ortiz is a Ph.D. student in the Department of Electrical Engineering, and is working with Professors **Kevin Bowyer** and **Patrick Flynn**.

Estefan won second place overall in the Competition, and was the highest ranked entry in the area of biometrics.

This is the second time that a team from Notre Dame has won a prize in this competition. A team led by Professor **Aaron Striegel** won second place in the 2009 Competition.

Graduate Student's Paper in *BMC Bioinformatics* - Top 10 Most-Viewed List

CSE graduate student **Ryan Kennedy's** recent paper titled, "An Automated Homology-based Approach for Identifying Transposable Elements," appeared in the journal *BMC Bioinformatics* and achieved both the "Highly Accessed" and "Top 10 Most-Viewed Article" designations. Kennedy's dissertation advisors are **Greg Madey** (CSE) and **Frank Collins** (Biological Sciences/CSE).



Jake Lussier Receives National Science Foundation Graduate Research Fellowship and Rev. Thomas A. Steiner Award

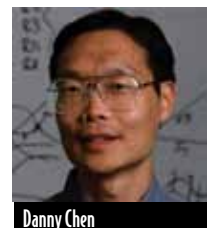
Jake Lussier, a recent graduate in the Department of Computer Science and Engineering, received a 2011 National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) Fellowship. The fellowship recognizes and supports graduate students pursuing research-based advanced degrees in NSF-supported technical fields. Lussier also received one of the College of Engineering's 2011 Rev. Thomas A. Steiner, C.S.C., Awards. These awards honor students for "dedication to their fields of study in engineering, outstanding leadership abilities and commitment to the values of Notre Dame."



A research advisee of Dr. Nitesh V. Chawla, Lussier is a member of the Data, Inference, Analysis and Learning (DIAL) Laboratory and the Interdisciplinary Center for Network Science and Applications (iCeNSA). He was previously named a Barry M. Goldwater Scholar, a Robert C. Byrd Scholar, and an Edward C. Ateyeh Undergraduate Research Scholar, and received an Honorable Mention in the Computing Research Association's Outstanding Undergraduate Researcher Award. Lussier will be pursuing a Ph.D. in Computer Science at Stanford University in the fall.

Professor Chen Receives a NAKFI Grant to Study Autoimmune Diseases

Professor **Danny Chen** receives a two-year grant for the project, "Multiscale Biomedical Imaging for Autoimmune Disease," from the National Academies Keck Futures Initiative (NAKFI), which is a program of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. This is a joint effort with Professors John MacKenzie (PI) and Rageshree Ramachandran at University of California, San Francisco and Professor Frank Chuang at University of California, Davis. The project aims to develop new biomedical imaging methods to better detect, quantify, analyze, and track autoimmune diseases. The multidisciplinary research team will focus on rheumatoid arthritis as a model disease to combine and test advanced imaging techniques in light microscopy, computer-aided pattern recognition, and molecular imaging.



University of Notre Dame
Department of Computer Science and Engineering
384 Fitzpatrick Hall
Notre Dame, Indiana 46556-5637

Nonprofit Organization
U.S. Postage
PAID
Notre Dame, IN
Permit No. 10

Contacts:

Director of Undergraduate Studies:

Professor Ramzi K. Bualuan
rbualuan@cse.nd.edu

Director of Graduate Studies:

Professor X. Sharon Hu
shu@cse.nd.edu

Department Chair:

**Schubmehl-Prein Professor
Kevin W. Bowyer**, kwb@cse.nd.edu



Computer Science and Engineering displays its commitment to the environment by choosing FSC certified paper for its newsletter. Please recycle it when you are finished.

ANNUAL CSE-EE PRE-GAME TAILGATE PARTY

September 3, 2011 Notre Dame vs. University of South Florida



PLEASE PRINT

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

YEAR/DEPARTMENT GRADUATED FROM _____

_____ NO. OF TAILGATE TICKETS ONLY \$15 EACH (NO LIMIT)
TOTAL \$ _____

_____ NO. OF GAME & TAILGATE PACKAGES \$85 EACH (LIMIT 2 PER ALUM)
TOTAL \$ _____

TOTAL AMOUNT ENCLOSED \$ _____

Make check payable to (we cannot accept credit cards): **University of Notre Dame**

Mail form with payment to:

Dian Wordinger
University of Notre Dame
Department of Computer Science & Engineering
384 Fitzpatrick Hall
Notre Dame, IN 46556-5637

Tailgate only cost is \$15 and includes hamburgers, bratwursts, salads, chips, cookies, and soft drinks. The party will be located in the main atrium of Stinson Remick and start at 11:30 a.m.

Limited number of game & tailgate ticket packages for CSE-EE alumni only, \$85 each. Payment is required to reserve a game and tailgate package.

**For more information, contact:
Dian Wordinger
Wordinger.3@nd.edu or
(574) 631-8320**