

Computer Science & Engineering NORTH*TEXAS Department of Computer Science

@ North Texas



and Engineering Newsletter Vol. 5, Spring 2008 www.cse.unt.edu Krishna Kavi, Chairman

Greetings from the **CSE** Chairman

Change and growth has been our theme for this year. In October 2007, ABET (http:// abet.org) visited us to consider the accreditation of our new Computer Engineering program. The visit went very well and we anticipate receiving accreditation for the program. We will



receive formal approval this summer. I want to thank the alumni who volunteered to be interviewed by the ABET team. This new Computer Engineering program has helped to change and grow our department.

Beginning this Fall, our B.A. in Computer Science will change to a B.A. in Information Technology. We have had much interest from UNT students in this new program and we expect this will further increase the number of students in our department. Each year our faculty has increased the number of publications and research grants. We expect this growth to continue.

In 2003, our CSE department joined the new UNT College of Engineering. Last Fall, the Founding Dean Oscar Garcia announced his plans to step down at the end of May. After a national search, UNT has named Dr. Costas Tsatsoulis as the new Dean for the College beginning August 1. Dr. Tsatsoulis is currently the Chair of the Department of Electrical Engineering and Computer Science at the University of Kansas. We hope you will support the College and CSE as we grow and reach for our goal of being the best in North Texas.

Krishna M. Kavi, Chair

UNT Seeks Industry Partners for I/UCRC

In February 2008, the Net Centric Software and Systems Consortium sponsored a NSF Industry University Cooperative Research Center (I/UCRC) Planning Meeting. These research centers aim to promote cooperative research between industry and universities.

The consortium is a joint venture involving academic, federal and state government, and commercial institutions to collectively promote and undertake research, education, technology development, technology transfer, and technological workforce development to enable the nation to transition into the new net-centric operation paradigm.

Currently the University of North Texas, Southern Methodist University, University of Texas at Dallas, and University of Texas at Arlington as well as Raytheon, Lockheed Martin Aeronautics, and several other companies are in the consortium. If you would like to be a partner in this I/UCRC, go to http://netcentric.cse.unt.edu/index.php.

Rada Mihalcea **Receives Prestigious NSF** Award

Congratulations to Rada Mihalcea on receiving the National Science Founda-Early Career Development (CAREER) Award. Rada received her CAREER Award in the Division of Information and Intelligent Systems. The \$500,000 award



support a five-year project entitled "Semantic Interpretation with Monolingual and Cross-lingual Evidence." For more information about Dr. Mihalcea and her research, go to her website at: http://www.cs.unt.edu/~rada.

The NSF CAREER Program offers the National Science Foundation's most prestigious awards for new faculty members. The CAREER program recognizes and supports the early careerdevelopment activities of those teacher-scholars who are most likely to become academic leaders.

NSF Awards Grant to Dr. Kathleen Swigger

The National Science Foundation has awarded \$499,252 to Dr. Kathleen Swigger to study the performance of student work teams in four countries as the teams write software. The ultimate goal of the project will be to create curriculum materials aimed at teaching students how to work more effectively in global software teams. The students working on this project will be from UNT, Panama, Great Britain, and Turkey.

Dr. Swigger said, "Outsourcing is not going to go away. There is a growing need to ensure that computer science students are taught the necessary skills to deal with this new type of programming. Students need to know how to use technology to work in culturally mixed and geographically distributed work teams, because distributed software development is becoming the norm."

Dr. Swigger says her research will have implications for geographically distributed collaborative learning teams in general, and furthers UNT's reputation as a student-centered, public research university. She adds the project has drawn interest from several major DFW employers. "Travelocity, Boeing, Lockheed Martin and Motorola do similar projects at their companies," Dr. Swigger notes, "and they are acting as advisors on the project."

Ram Dantu Gets **Another NSF Research Grant**

Dr. Ram Dantu is the Principal Investigator for a research grant awarded by the National Science Foundation. Dr. Krishna Kavi and Dr. Parthasarathy Guturu are the Co-Principal Investigators for this award. This project, "A Testbed for Research and Development of Next



Generation 9-1-1 Services," is a collaboration between University of North Texas, Columbia University and Texas A&M University, where UNT will be the lead institution, to develop a testbed that will enable research on understanding and analysis of next generation 9-1-1 services.

NSF has awarded a total of \$1,342,000 for this project. UNT will receive \$650,000 of this amount. Since September 2006, Dr. Dantu has been the PI on NSF grants of over \$2.8 million. For more information on Dr. Dantu's research grants, go to: http://www.cse.unt.edu/~rdantu/ research_grant_activities.html

Robocamps Receive Additional Funding

2008 Robocamp summer day camps received additional financial support in the form of two new grants. The Texas Workforce Commission has awarded an additional \$30,000 and the RGK Foundation has awarded



\$15,000. These are in addition to a \$102,000, two-year grant from the Texas Workforce Commission and a \$30,000 grant from the Motorola Foundation that allowed Robocamp to expand to both young men and young women entering grades 8 through 12. Previously, it had only been offered to young women.

David Keathly, Co-Director of Robocamp, said, "This will be the largest summer camp program to date with about \$125,000 to support programs for this summer, and about \$50,000 already in hand for next summer," Keathly is Co-director of Robocamp with Robert Akl, Assistant Professor in the Department of Computer Science and Engineering. Krishna Kavi, Chair of the CSE Department, is also a co-principal investigator on the Texas Workforce Commission grant.

Robert Akl reports that "we will be hosting a total 12 camps this summer, including two camps for girls, three for boys and a co-ed Robocamp. We are also holding a camp for Counselors and teachers as well as an Advanced Robotics Workshop for returning young women." For more information about these CSE camps, go to http:// www.cse.unt.edu/~dkeathly/robocamp.

BA in IT to Begin in **Fall 2008**

Beginning this Fall, the B.A. in Computer Science will change to a B.A. in Information Technology. In July 2005, the CSE Advisory Council suggested a radical "inside out" approach whereby students are not exposed to the traditional science of Computer Science right away. The curriculum begins with two courses in Information Technology that introduce students to the design of enterprise information systems and distributed systems. These courses are lower division "capstone" style courses where the primary focus will be a large team development project.

At the end of the program, students will be required to take a two-semester senior capstone course sequence, as well. In addition, students will complete a 9 hour specialty sequence of their choice within the IT and Computer Science area. This will provide the student with depth of knowledge in one particular focus area.

The most innovative aspect of the program is the 18 hour supporting specialization sequence that permits students to take courses outside of their major but in support of an applications area for their IT skills. Sample programs have been identified in areas such as Information Security, Pre-Med, Pre-Law, Management, Criminal Justice, Bioinformatics, and others. Transfer students may also be able to use specializations from Associates degree programs such as Networking as long as the courses are from a properly accredited community college. This feature gives students maximum flexibility in designing a degree program to meet their specific career interests.

New CSE Department Website Launched

In March 2008, the Computer Science and Engineering Department unveiled a completely revamped version of the department website at www.cse.unt.edu. new website is now maintained with an easily configurable Content Management System, which will simplify updating information



Don Retzlaff. CSE Webmaster

on the site as well as adding new information.

The site now features a UNT RSS Feed and a new Media Gallery section that already includes hundreds of photographs related to the department and its activities. The media section is constantly being updated with new content. In the future, there are plans of having department video and audio in the gallery as well as photos. There are also plans to add a web forum for various department classes, and faculty and advising blogs to help keep everyone up to date in these areas.

If you haven't visited the department website in a while, now is a perfect time to see its new, fresh look. You are also invited to register on our alumni page at http://www.cse.unt.edu/site/node/71. We hope you enjoy the new site and its new look and feel.

Dr. Ian Parberry Named | **Microsoft MVP Again**

For the fifth consecutive year, Dr. Ian Parberry has received Microsoft's Most Valuable Professional (MVP) Award in the Windows-XNA/DirectX category. Microsoft presents the MVP Award to thank individuals for their exceptional contributions to technical communities worldwide. Microsoft also benefits from engaging with MVPs through conferences, user groups, code camps, the MVP Global Summit, and other events. MVPs share their independent, real-world feedback with Microsoft, thereby helping Microsoft better understand users' needs, improve current products, and develop future technology.

During the Spring semester, Dr. Parberry was on the Program Committee for the Microsoft Academic Days on Game Development in Computer Science Education (GDCSE'08). This conference is a focal point for academic efforts using computer and console games within the Computer Science curriculum. Jointly sponsored by Microsoft Research and Electronic Arts and held in cooperation with ACM SIGCSE, the conference is targeted at both computer science educators and researchers, promoting new efforts in the creation and management of courses and curriculum using game development.

CSE Faculty Receive Awards





Robert Akl receives his award from Dr. Reza Mirshams, Associate David Keathly with his Outstanding Advisor award. Dean of the College of Engineering

During National Engineers Week in February 2008, the UNT College of Engineering and the Center for Student Development hosted a banquet to recognize outstanding students, student organizations, and faculty members at the College. Dr. Robert Akl, Assistant Professor in the Department of Computer Science and Engineering, received the UNT College of Engineering Excellence in Undergraduate Teaching Award.

David Keathly, Lecturer and Advisor in the CSE Department, received the UNT College of Engineering Faculty Contribution Award for his outstanding service to the College. Mr. Keathly also received the Outstanding Advisor award from the Center for Student Development. Mr. Keathly was nominated by students and former students in

several student organizations that he has advised in the CSE Department.

On Honors Day on April 11, 2008, Dr. Farhad Shahrokhi received the UNT Honor Professor Award, one of the highest honors given to UNT faculty members students. Congratuations to Dr. Shahrokhi.



Texas ARP Grant Awarded to CSE Faculty



Dr. JungHwan Oh, Dr. Xiaohui Yuan, and Dr. Bill Buckles (L-R above) have been awarded \$112,944 by the Texas Advanced Research Program (ARP) for their project "Computer-aided Diagnosis for Gastrointestinal Bleeding using Wireless Capsule Endoscopy." This grant is the largest amount of funding of the six grants received by UNT this year from the ARP. Dr. Yuan is the Principal Investigator of this project. Dr. Liangmei Hu, visiting scholar from Hefei University of Technology in China, will work closely with Dr. Yuan on the project. The group will coordinate their research with Dr. Shoujiang Tang, a gastroenterologist with UT Southwestern Medical Center at Dallas, who has experience working with wireless capsule endoscopies.

The ARP was created by the Texas Legislature in 1987 as competitive, peer-reviewed grants program to fund scientific and engineering research projects of faculty members at Texas higher education institutions. The programs are administered by the Texas Higher Education Coordinating Board.

Ben Hamilton Scholarship Awarded



Jonathan Holman surrounded by (L-R) Clarence Hamilton Dr. Krishna Kavi, and Patricia Hamilton.

Jonathan Holman, CSE sophomore, has received the first Ben Hamilton Scholarship awarded by the CSE Department. Ben Hamilton received his B.A. in Computer Science in 2003, but he passed away one year ago in April 2007. Ben's parents, Clarence and Patricia Hamilton, have established a scholarship fund to honor the memory of their son. Several alumni also contributed to this scholarship in memory of Ben.

In February 2008, Mr. and Mrs. Hamilton visited the CSE Department to meet with Jonathan and tour the department. Dr. Kavi, Chair of the CSE Department, was on hand to thank Mr. and Mrs. Hamilton for endowing this scholarship for CSE students. To see more pictures, visit the Ben Hamilton Scholarship page at:

http://www.cse.unt.edu/site/node/140

Outstanding CSE Students for 2007-2008

Hector Guillermo Cuellar Rios-Outstanding Undergraduate Student in Computer Science

Hector Guillermo Cuellar Rios is from Nuevo Laredo, Mexico. He came to the U.S. to study because his elementary



school teacher, Valentin Niño, provided him with the necessary financial means. Hector is a senior with a double major in Math and Computer Science. He has been a Math Tutor at the Math Lab since Spring 2005. Starting in Fall 2006, Hector started working with Dr. Yan Huang. He has also worked as a Research Intern at the Storage Group of IBM Almaden Research Center. Hector presented the results at the ADMI 2008 conference with the title "Scalable Information Lifecycle Management." Hector worked as a Teaching Assistant for Dr. Huang in Fall of 2007, and currently he works as a Research Assistant for her. In 2007, he received the Verizon undergraduate scholarship. This summer Hector will return to the IBM Almaden Research Center. He is also part of the team Knapsackers@UNT programming team that recently represented the South Central Region of the U.S. at the 2008 ACM-ICPC World Finals in Banff, Canada.

Paul Sroufe - Outstanding Undergraduate Student in Computer Engineering

Paul Sroufe received his B.S. in Computer Engineering with a minor in Mathematics in May 2008. Paul has been working



with Dr. Ram Dantu for over a year on various research projects and papers. In April 2008, Paul, along with Dr. Dantu and Henning Schulzrinne, published "Experiences in Building a Multi-University Testbed for Research in Multimedia Communications" at the Next Generation Software workshop at the IEEE International Parallel & Distributed Processing Symposium (IPDPS). After graduation, Paul will continue here at UNT doing a M.S. in Computer Science. During this time, he will be working on the Video Development Platform. He has already worked on this project for the past six months. Over the next few years, Paul plans to develop many new innovative applications on the Video Development Platform with his research team.

Husain Husna - Outstanding Master's Student in Computer Science

Husain Husna received the Bachelor of Engineering (B.E) in Computer Science from Mumbai University in May 2006. He was accepted at UNT with a Graduate School scholarship for his excellent performance at Mumbai University. During his stay at UNT,



he worked as a Research Assistant with Dr. Ram Dantu in the Network Security Laboratory (NSL). Husain published research papers in prestigious conferences and journals. Husain successfully defended his thesis titled "Models to Combat Email Spam Botnets and Unwanted Phone Calls" in February 2008 and graduated from the Computer Science Department with a GPA of 4.0. Currently, he is working as an Oracle Configurator Developer with 92 Technologies.

Srivamsi Tarigopula -Outstanding Master's Student in Computer Engineering

Srivamsi Tarigopula was interested in embedded system



design and started her research work in the VLSI design and CAD Laboratory (VDCL). She successfully defended her thesis in December 2007, and graduated in Spring 2008. She loves research work, but also enjoys being involved in extracurricular and co-curricular activities. She was chosen as a CSEagles ambassador in the CSE Department. She actively participated in the India Student Association at UNT as the creative coordinator and hosted cultural shows with an audience of over 500 people.

Prakash Reddy Kolan -Outstanding Ph.D. Student in Computer Science

Prakash Kolan graduated with a Ph.D. in Computer Science in Fall 2007. He worked as a Research Assistant for Dr. Ram Dantu in the



Network Security Laboratory. In July 2007, Prakash successfully defended his dissertation titled "Socio-Technical Defense against Voice Spamming". The journal article he co-authored with Dr. Dantu, Herman Oosterwijk, and Husain Husna, "Securing Medical Networks," was ranked in the top 7 among the top 25 hottest articles by ScienceDirect. Continuing his IP Communications research at UNT, Prakash is now employed at Niksun, a Forensics and Compliance company, as a Researcher in the VoIP and Media Solutions group. He is currently involved in the design and development of voice and video applications.

Focus on Mary Grumbein

Mary Grumbein was a part of the Department of Computer Science from 1989 to 2003. Her fourteen years included assisting chairmen Tom Jacob, Thomas Irby, Chao-Chih Yang, Paul Fisher, and Krishna Kavi.



She truly enjoyed her work in the department as the Administrative Assistant, watching its growth and welcoming new faculty as they came in to be a part. Her paperwork involved mostly the financial end of things—payroll, budgets, purchasing on different accounts (including grants), etc. One of her more special memories was the celebration of

the 30th Anniversary of the department celebrated by a weekend with very special speakers, a banquet, a student picnic, a return of alumni, and other activities.

As she now occasionally visits the department to see old friends, she is amazed at all the changes that are occurring with the new College of Engineering at Discovery Park. There is a real explosion in the size of facilities, faculty, number of classes, etc. Mary is glad Sally is keeping track of everything now since she is truly enjoying retirement.

She keeps busy by reading, inspirational speaking, a membership in a women's group that raises money for scholarships and supports Cottey College, a Bible study, and occasional trips to North Carolina to visit grandsons. She fondly remembers all the wonderful memories of her 14 1/2 years in the "old" CSCI department, a special time in her life.

A C&E Alumni Love Story

Brandon Parker received his B.S. in Computer Science in 2003 and his M.S. in Computer Science in 2006.



Cheryl-Annette Kincaid received her B.A. in Computer Science in 2003 and her M.S. in Computer Engineering in 2007. On September 1, 2007, they were married. This is their CSE love story.

While at UNT, Brandon was able to explore his technological side through both the academic and non-academic opportunities. He got internships at Verizon and IBM, helped the Denton Wesley foundation design and install their entire network, and had lots of fun working with computer security at the UNT CoPS lab and participating in the Collegiate Cyber Defense contests. Cheryl-Annette's decision to learn to more about computers led to a major in computer science, a minor in electronics, a job maintaining five computer labs, summer internships at the National

Solar Observatory, and a masters in computer engineering.

Cheryl-Annette and Brandon actually met through the UNT Chess Club. Over the next several years, the two learned they worked well together, and Brandon helped Cheryl-Annette found the Council of Engineering Organizations, lead the student branch of the Institute of Electrical and Electronics Engineers, and run several engineering career fairs.

On June 1, 2006, Brandon proposed to Cheryl-Annette atop a mountain in Colorado. Fifteen months later on September 1, 2007, they were married. Brandon and Cheryl are now software developers for L-3 Communications and live in Royse City, TX. You can learn more about their story at http://www.brandonandcheryl.com



Michael Mohler, Jack Lindamood, and John Rizzo right after the Challenge24 contest in Budapest.

The UNT Programming Teams, Knapsackers@UNT and the Texas Codeboys, have had a very productive year competing in regional, national and international competitions. The Knapsackers@UNT won first place in the ACM SouthCentral Regional competition and qualified for the World Finals held in Banff Springs, Canada in April 2008. They received an Honorable Mention at the World Finals. The Knapsackers also won 1st place in the IEEE Extreme 24-hour programming competition beating out 130 or more teams from around the world.

The Texas Codeboys once again qualified for the Challenge24 Final round competition in Budapest, Hungary, placing 4th in the online qualifying round. They placed 26th in the final round. This is the third year that the Codeboys have participated in this event. They are the first and only USA team to ever qualify for the final round in the eight year history of the contest.

The Texas Codeboys are: John Rizzo, Michael Mohler and Jack Lindamood. The Knapsackers are John Rizzo, Robert Burke, and either Hector Cuellar or Michael Mohler. CSE coaches are Ryan Garlick and David Keathly.

UNT CSE Programming Teams Have Successful Year



John Rizzo, Robert Burke, and Michael Mohler at the IEEExtreme Programming Challenge.

Robert Burke, Hector Cuellar, and John Rizzo in front of a glacier in Canada, where the ACM World Finals were held.

Share your news with other alumni! Send an email to: newsletter@cse.unt.edu.

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