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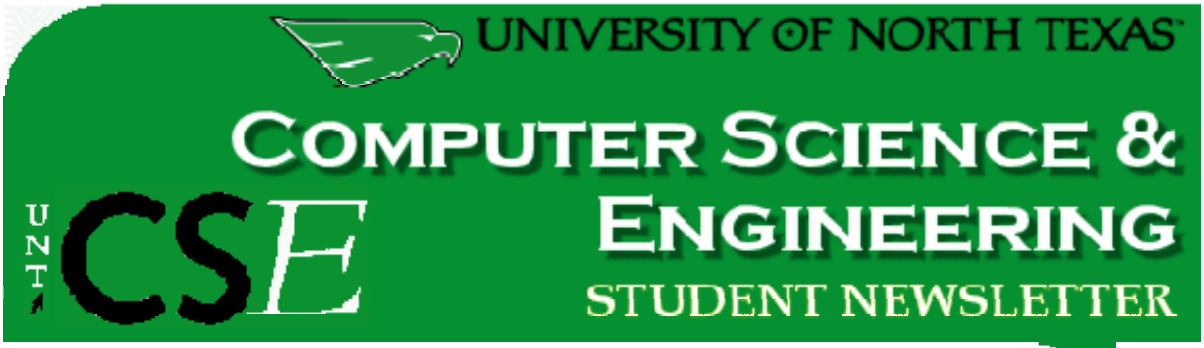

April 2011 Edition

Department of Computer Science and Engineering News

Student News

College of Engineering News

Greetings from the CSE Interim Chair

Dear CSE Students,

UNT Honors Day was held on April 8 and several of our CSE faculty members and students were recognized at the convocation. Congratulations to Dr. Armin Mikler for receiving the 'Fessor Graham Award, which is the highest honor students can bestow on a UNT faculty member. Congratulations to our CSE students who received Outstanding Student awards at Honors Day. All of these students are featured below in the Student News section.

The College of Engineering is hosting its first Design Day on April 29 and students in our CSE Department as well as other programs in the College will be presenting their posters and presentations from their final research projects. Members of our Industrial Advisory Boards have been invited to see what students are doing at the College of Engineering. Everyone is invited to attend this event so I hope to see you there.

As we are getting close to the end of Spring 2011, I wish the best of luck to our graduating students. I hope our department has prepared you for your career. Please keep in touch with us in the future by registering on the alumni page of our website. After you graduate, I hope you will continue to support our Department of Computer Science and Engineering and the University of North Texas.

Ian Parberry
Professor and Interim Chair

Department of Computer Science and Engineering News

Dr. Armin R. Mikler receives 'Fessor Graham Award

Dr. Armin R. Mikler, associate professor, received the 'Fessor Graham Award at the UNT Honors Day Convocation on April 8, 2011. This award is the highest honor bestowed by the student body at UNT. This marks the first time a faculty member in the Department of Computer Science and Engineering has received this prestigious award.

The 'Fessor Graham Award recognizes one

Ning Luo is originally from China. She received both of her B.S. and M.S degrees from the University of Science & Technology, Beijing. When she was at the university in China, she received several competitive scholarships, such as SONY scholarships (only ten undergraduate students are selected in the whole university each year), and was an honor undergraduate student of Beijing when she graduated.

Since Ning joined UNT, she has had a cumulative GPA of 4.0. She received USC scholarship for 2009-2010 academic year and RIM Graduate Scholarship in 2011. As a research assistant, Ning has contributed to several large projects. She worked with Dr. Costas Tsatsoulis on NASA funded project "Sensor Web Agents that Negotiate" (SWAN), and with Dr. Yan Huang on "Low Cost Wireless Network Camera Sensors for Data Collection and Traffic Monitoring" project funded by the Texas Department of Transportation. Ning's thesis was based on her second project.

Ning would like to express her most sincere gratitude to her thesis advisor, Dr. Yan Huang, who has always been there steering the direction and providing the guidance as best as she can. Ning would also like to take this opportunity to thank Dr. Bill Buckles and Dr. Costas Tsatsoulis. Their mentoring went far beyond the projects and enabled her to grow intellectually during the time at UNT. ↑

Outstanding Master's Student in Computer Engineering - Okobiah Oghenekarho

Oghenekarho Okobiah received his B.S in Electrical Engineering from South Dakota State University, Brookings in 2008. He worked for a year as an Electrical Engineer. His interest in chip and processor design led him to pursue his Masters in Computer Engineering. He began his Masters studies at UNT in the Fall 2009 semester. His area of interest is Nanoscale VLSI Systems Design. Under intense supervision from his major professor Dr. Saraju Mohanty, he was able to complete his Master's thesis in time. He received the Academic Achievement Scholarship in 2010. Feedback from Dr. Elias Kougianos was always provided, which gave industrial perspectives to his research.

Oghenekarho defended his thesis titled "Exploring Process-Variation

Tolerant Design of Nanoscale Sense Amplifier Circuits" in October 2010. Following his graduation, he immediately continued as a Ph.D. student in the same field. His Ph.D. dissertation is supervised Prof. Saraju Mohanty and co-supervised by Prof. Elias Kougianos. His is funded by a National Science Foundation (NSF) award as a research assistant in the NanoSystem Design Laboratory (NSDL). His current research interests include Kriging metamodeling and fast optimization of differential circuit designs to mitigate the effects of correlated process variations in them. He will present his first publication in this area at the highly selective GLSVLSI 2011 conference.

In his spare time (which is rare to come by), Karo likes to read novels, play tennis and learn how to play the violin. ↑

Outstanding Doctoral Student in Computer Science and Engineering - Samer Hassan

Samer Hassan, a native of Egypt, received his B.S. in Physics from Cairo University with honors. As the highest achieving student in the graduating class, he was awarded the Mahmoud Mokhtar Award for Excellence in Physics. After graduation, he won a full scholarship at the Information Technology Institute in Egypt where he pursued a post graduate diploma; and later, due to his commendable performance, was awarded the Institute's Outstanding Student Award.

Subsequently, he joined UNT and received his M.S. in Computer Science. Throughout his studies, he has actively promoted multiculturalism and diversity on campus, thus leading to him being awarded the Outstanding International Graduate Student Award, which recognizes excellence in both academic and extracurricular endeavors.

Currently, Samer is pursuing his Ph.D. in Natural Language Processing under Dr. Rada Mihalcea. He has published 12 articles at top tier conferences and received the "Best Student Paper" award from the IEEE International Conference for Semantic Computing. As part of his academic services, he served as guest editor for the Speech and Language Journal and co-chair of the TextGraph-4 Workshop.

Additionally he served as a program committee member/reviewer for 15 conferences and workshops. In the summer of 2010, Samer did an internship at the Google headquarters in Mountain View, California, where he was awarded the Google Ph.D. Intern Scholarship for the 2010-2011 academic year, which is granted to the top Ph.D. interns at Google. During his internship, he was also chosen to serve as a Google Student Ambassador at UNT, where he subsequently founded the Google Student

Chapter organization. ↑

Outstanding Students name positive influences

The following College of Engineering faculty and staff were named by the outstanding students as a positive influence in their college career:

Dr. Rada Mihalcea
Dr. Saraju P. Mohanty
Kaitlin Britt
Dr. Yan Huang
Dr. Gary Goodman
Dr. Robert Hayes ↑

CSE Student defends Ph.D. Dissertation

Ning "Martin" Xu defended his dissertation "Physical-layer network coding for MIMO systems" on March 24, 2011. In this picture, Martin is in the middle with his major professors, Dr. Yan Huang on the left and Dr. Shengli Fu on the right.

Dissertation Abstract:

The future wireless communication systems are required to meet the growing demands of reliability, bandwidth capacity, and mobility. However, as corruptions such as fading effects, thermal noise, are present in the channel, the occurrence of errors is unavoidable. Motivated by this, the work in this dissertation attempts to improve the system performance by way of exploiting schemes which statistically reduce the error rate, and in turn boost the system throughput.

The network can be studied using a simplified model, the two-way relay channel, where two parties exchange messages via the assistance of a relay in between. In such scenarios, this dissertation performs theoretical analysis of the system, and derives closed-form and upper bound expressions of the error probability. These theoretical measurements are potentially helpful references for the practical system design.

Additionally, several novel transmission methods including block relaying, permutation modulations for the physical-layer network coding, are proposed and discussed. Numerical simulation results are presented to support the validity of the conclusions. ↑

Shijun Tang receives Best Poster Award