

CSE QUBITS

Computer Science and Engineering Newsletter

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Greetings from the Chair

Happy Holidays! I hope you all have had a successful Fall semester. Spring semester is right around the corner; please be sure to register for the courses you need! Delaying could mean you miss out on a class you want or a course may even be dropped from the schedule due to low enrollment!



As part of our distinguished speaker series, Dr. Mahesh Mehendale came December 4, 2019, and spoke about Machine Learning at the Edge of 'always-on' intelligent sensor networks. You can read all about the event in this month's edition under Department News.

We rely on generous donations to fund conferences, host events, and student travel. Please consider passing our donation information on to your friends and family so we can continue our practice of supporting student opportunity through travel.

We'd also like to encourage our students to take advantage of the unique clubs and student organizations available next semester. Please check out our upcoming events for more information. We are redesigning how we support our student orgs, so be sure to stay tuned.

We'll see you all next semester!

Donors/Gifts

Thanks to generous donor gifts, the CSE department is able to fund student travel, student organization special projects, department remodeling and overhaul, and put valuable resources into other student centric activities. Please remember that we depend on donations to keep activities and events alive. Many employers offer a donor match, so please encourage your family to consider donating and to check with their employer to see if they match! You can even designate what you want your donation used for!

If you would like to contribute and make a gift, contact Diana.Bergeman@unt.edu.

Connect With Us



Department News

UNT CSE Hosts Distinguished Speaker

As part of our distinguished speaker series, Dr. Mahesh Mehendale came December 4, 2019, to speak about Machine Learning at the Edge of 'always-on' intelligent sensor networks. Dr. Mahesh Mehendale is a TI Fellow and leads the Nano-power Foundational Technology at Kilby Labs, Texas Instruments. His current areas of focus include ultra-low-power circuits and micro-architectures for "always-on" sensor nodes. He will be talking about Deep Neural Networks (DNNs): DNN's have emerged as the promising machine learning technology for a number of inferencing/classification problems including object detection, face recognition, gesture recognition, voice command recognition, sound signature detection, anomaly detection, etc.



L to R: Dr. Nagendra Gulur, Dr. Barrett Bryant, Dr. Mahesh Mehendale, and Krishna Kavi.

We had a great turn-out, with over 50 students, faculty, and staff in attendance.

CAE Ceremony



L to R: Diane Janosek, Dr. Dantu, Dr. Bryant, and Dr. Thompson and Keith Holtermann.

The UNT Center for Information and Cybersecurity was recently re-designated as a Center of Academic Excellence in Research (CAE-R) in Cyberdefense Research for 2019-2024 by the U. S. Department of Homeland Security and National Security Agency. Center Director Dr. Ram Dantu, Senior Lecturer Dr. Mark Thompson and Ph. D. student Logan Widick were instrumental in this recertification. Drs. Dantu and Thompson along with Chair Dr. Barrett Bryant attended the re-designation ceremony at the CAE in Cybersecurity Symposium on November 21st-22nd, 2019, in Phoenix, Arizona.

Taking Healthcare to a Whole New Level With Robust Security

Professor Saraju Mohanty recently received a \$500,000 three-year grant from the National Science Foundation to further advance smart healthcare. The healthcare industry is estimated to contribute up to 30 percent of the world's stored data, and healthcare devices, such as pacemakers and insulin pumps, are susceptible to cyber security attacks just like any other Internet connected device. Mohanty, along with Electrical Engineering Professor Elias Koungianos and College of Health and Public Service Professor Elias Mpofu, plan to make that data more secure by launching Easy-Med, a hardware-assisted solution that includes security and privacy technology along with training for healthcare professionals. Mohanty says Easy-Med also will help store large amounts of data created by medical devices, improving how the healthcare industry manages data.



Dr. Saraju Mohanty

Funding for the project is split equally between UNT and the University of Texas at Tyler.

CSE Faculty Purchases Autonomous Vehicle



Dominic Carrillo and Dr. Qing Yang.

With the support of UNT's Office of Research and Innovation, College of Engineering, Department of Computer Science and Engineering, the Connected and Autonomous Vehicle (CAV) lab recently purchased an autonomous vehicle, a Polaris GEM e4 model, from the AutonomouStuff Inc. This electric car, together with other sensors and computing resources available in the lab, help us establish a state-of-the-art CAV research platform at UNT, enabling cutting edge research that has been supported by Fujitsu Laboratories of America, Toyota Infotechnology Center, and National Science Foundation."

Visiting Fulbright Scholar Researching Computer's Understanding of Graphics

Pavel Myznikov loves artificial intelligence; it's a passion that's brought him all the way from Russia to Texas. The computer science and engineering doctoral student joined UNT Engineering this fall as part of the Fulbright program. Under the leadership and guidance of Yan Huang, Senior Associate Dean for the College of Engineering and Professor in the Department of Computer Science and Engineering, Myznikov is exploring new and exciting ways to help computers better understand graphics and images and to automate the development speed. Myznikov says that so far all the research within the field is devoted to unstructured pictures like photos and art. It makes sense in a time where social media dominates much of the public's interest. His focus, however, is on structured pictures like research posters or presentations, helping to further advance the needs of the academic and research-intensive fields.



Pavel Myznikov

Student News

Biomedical AI Lab to Host Open House

The department's new Biomedical AI lab group will have its second open house event on Wednesday, January 15th at 1:00-2:00pm. Come chat with the research students if you're curious about the lab, particularly if you're interested in joining a research project, but also if you just want to chat. The group is led by Dr. Mark V. Albert, one of our new faculty members who also has a secondary appointment in Biomedical Engineering. The lab is actively recruiting students to lead or contribute to ongoing projects. You can chat with students there about their work using a variety of machine learning techniques including Deep Learning, HMMs, Kalman filters, and a variety of other machine learning prediction models. The students will discuss how they are applying these tools to problems with simulated tumor tracking, assessment of lower-limb amputees, measuring spasticity, and systems to predict surgery outcomes for children with cerebral palsy. Snacks and drinks will be provided.



Last semesters open house photo

Paula Mears Thesis Defense



Please join us in congratulating Paula Mears on successfully defending her thesis on "Managing Access During Employee Separation Using Blockchain Technology" on December 3, 2019.

Pictured left to right are Dr. Mark Thompson, Paula Mears, major professor Dr. Ram Dantu, and Dr. Kirill Morozov.

Md Abu Sayeed Doctoral Dissertation



Please join us in congratulating Md Abu Sayeed on successfully defending his doctoral dissertation on “Epileptic Seizure Detection and Control in the Internet of Medical Things (IoMT)” on November 26, 2019. Pictured left to right are Dr. Hui Zhao, Dr. Qing Yang, Md Abu Sayeed, major professor Dr. Saraju Mohanty, and Dr. Elias Kougianos.

Pictured left to right are Dr. Hui Zhao, Dr. Qing Yang, Md Abu Sayeed, major professor Dr. Saraju Mohanty, and Dr. Elias Kougianos.

Congratulations to Our Graduates:



Dr. Armin Mikler and Dr. Harsha Gwalani,



Dr. Ram Dantu and Dr. Josh Talkington



Dr. Bill Buckles and Dr. ABM Rezbaul Islam



Dr. Song Fu and Dr. Zongze Li

Master Students:

Computer Engineering:

Austin Lee Burbridge
Sai Krishna Manchala
Laavanya Rachakonda

Computer Science:

Carlos Gustavo
Diaz De Leon
Sharanya Gottimukkula
Vamsikrishna Govada
Ram-Chandra-Reddy Mallannagari
Saiteja Reddy Malle
Latif Maluku
George Mihaila
Sourab Reddy Pailla
Arshad Shaik
Arpan Sharma
Dinakar Teja Tirunagari
Sri Sravya Tirupachur Comerica

Bachelors:

Computer Science:

Aaron Bucklin
William Fosmire
Ravnit Benipal
Karla Lara
Louis Gonzales
Hoang Huynh
Chhering Lama
Jacob Montes
Reema Sharma
Travis Nguyen
Shamal Alexander

Christian Castillo
Brandon Evans
Chalet Shelton
Esteban Delasancha
Daniel Shadel
Elliot Schemmel
Jax Saunders-Dunlap
Juan Orta
Jeremiah Dickens
Adam Bell
Fahim Shams
Daniel Merlino
Jonathan Wendt

Fischer Davis
Kimberlee Ashmore
Justin Hicks
Amy Raney
Cole Thompson
Gerardo De La Maza
Logan Kuhn
Dillon McDonald
Jose Duarte
Banza Dinanyi
Dheepthi Somangili Babulal

Information Technology:

Kevin Spracklen
Zachary Scott
Michael Dennis
Buchi Diali
Corey Gendron
Terrence Jackson
Marshall Montgomery

Computer Engineering:

Eli Cruse
Sadman Sakib Ahmed
Didier Munkindji
Alexander Villalobos Quintanilla
Neil Mistry
Philip Hunsberger
Ryan Kaakaty
Adesunkanmi Afolabi
James Bryan Artacho

Hagen Hoffman is passionate about Kappa Sigma

Hagen Hoffman is a sophomore in CE and him and his friends decided to go about bringing Kappa Sigma back to UNT's campus. Hoffman currently presides as president for the organization. He is now considered as one of the four founding fathers. Although he was unsure of how he felt about joining Greek life at the time, he is now extremely passionate about the fraternity and hopes Kappa Sigma can "be the start of something new" in Greek life at UNT.

Hoffman is also a member of a student ministry called Student Mobilization and the Ultimate Frisbee club.



Hagen Hoffman

Eagle Call - Upcoming Events

- First day of classes—January 13, 2020
- Natural Language Processing Graduate Merit Scholarship. For more information, please visit: <https://computerscience.engineering.unt.edu/news/natural-language-processing-graduate-merit-scholarship>
- Biomedical AI Lab open house on January 15, 2020.
- CS for All— January 13, 2020 through January 15, 2020.

“Git” Informed- Did You Know?

- E-mail was developed much before internet was developed.
- In 1990, Tim Berners-Lee develops HTML, which made a huge contribution to how we navigate and view the Internet today.
- The group of 12 engineers who designed the IBM PC were called ‘The Dirty Dozen’.
- UNT’s Computer Science and Engineering is ranked 16th in the nation for enrolling and graduating women!

Faculty News

Dr. Stephanie Ludi Appointed Editor in Chief of ACM



Dr. Stephanie Ludi

On August 1, Dr. Stephanie Ludi was appointed Editor-in-Chief of ACM's Transactions on Accessible Computing. The premier journal is focused on disseminating the latest research on the design and use of technologies for persons with disabilities. Dr. Ludi's term will be for three years.

Puzzle Column

Find out Cheryl's Birthday. This puzzle appeared in the Singapore and Asian Schools Math Olympiad and went viral in 2015. The puzzle is:

Albert and Bernhard become friends with Cheryl and want to know when her birthday is. Cheryl, however, simply provides the month to Albert and the day of the month to Bernhard from a possible list of 10 dates shown below:

May		15	16			19
June				17	18	
July	14		16			
August	14	15		17		

(Albert does not know day of the month and Bernhard does not know the month)

Albert: I don't know when Cheryl's birthday is, but I know that Bernhard doesn't know too.

Bernhard: At first I don't know when Cheryl's birthday is, but I know now.

Albert: Then I also know when Cheryl's birthday is.

So when is Cheryl's birthday?

(Solve this on your own, there are solutions posted on the web that you do not want to consider before you have attempted to solve this by yourself.)

As a bonus: extend Cheryl's birthday puzzle on the 3rd dimension – year she was born. Consider a 3rd friend David who has been told only the year she was born. Change the above table in order to make everything work in the 3-dimensional setting

Please email Nagendra.gulur@unt.edu for puzzle ideas and solutions to posted puzzles. Please start the subject line of your email with "PUZZLE:". We will post the names of the first 10 students who provide correct solutions in the next month's newsletter.



** The first one to successfully solve the puzzle will receive a FREE swag bag



Would You Rather?

The November 2019 winner is:



Don't forget to stop by the bulletin board located in Route 66 and cast your vote for December's Would You Rather: Write a 5-paragraph essay on the meaning of the Holidays or do a one page of holiday themed math problems?

