

# CSE QUBITS

Computer Science and Engineering Newsletter

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## Greetings from the Chair

You've heard about the global situation surrounding novel coronavirus (COVID-19) that continues to evolve and the actions that has been taken to further prevent it's spread. At this time there are no confirmed or suspected cases among the UNT community. Regardless, please remember it is always important to take these everyday actions to help prevent the spread of any respiratory virus: Wash your hands often with soap and water for at least 20 seconds. If soap and water are not available, use an alcohol-based hand sanitizer. Avoid touching your eyes, nose and mouth with unwashed hands. Avoid close contact with people who are sick. Stay home when you are sick. Cover your cough or sneeze with a tissue, then throw the tissue in the trash. Clean and disinfect frequently touched objects and surfaces. Continue to check your email for more updates from the University.



Summer and Fall semesters are right around the corner. Registration has started, please be sure to check your registration dates so that you'll be allowed in your desired courses. 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!

## 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](mailto:Diana.Bergeman@unt.edu).

## Connect With Us

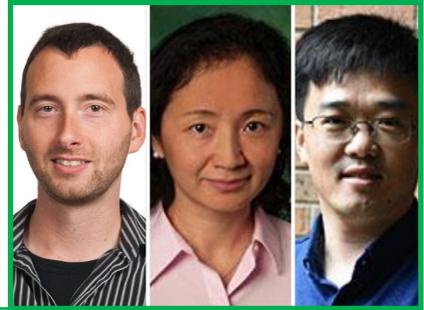


# Department News

## New AI Program Highlights By Local News

Senior Associate Dean and Director of Graduate Studies Yan Huang and Department of Computer Science and Engineering Assistant Professor Mark Albert were recently interviewed by CBS about the new M.S. in Artificial Intelligence. Ph.D. students from Albert's and Qing Yang's labs demonstrated projects they were working on in autonomous systems, machine learning, and biomedical engineering, all three of which are concentrations offered in the new program. [Click here to view the story.](#)

Pictured L to R: Dr. Mark Albert, Dr. Yan Huang, and Dr. Qing Yang



## New MS in Artificial Intelligence



UNT Engineering has opened a new master's of science degree in artificial intelligence. As the only standalone program in the state of Texas and one of few nationwide, this unique program will offer students the opportunity to enhance their skillset in the growing field of AI. [Click here](#) to learn more.

## UNT Biomedical AI Lab Attends Shriners Workshop

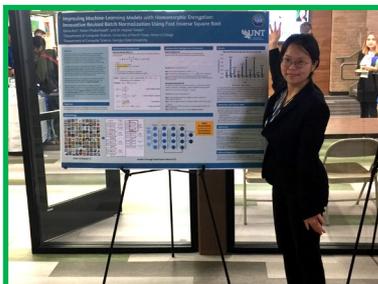
UNT was well represented at a full-day workshop on Thursday, February 27th, held prior to the Shriners Hospital Network Bone and Muscle Symposium in Chicago. The UNT Biomedical AI lab is the lead group for the data analysis portion of a recently awarded 2-year grant to use gait analysis data across the Shriners network to predict surgical outcomes for children with cerebral palsy. Dr. Albert led the discussion of the machine learning strategies to be used over the 2 year course of the award with representatives from multiple motion analysis centers across the Shriners network. CSE PhD student Steve (Shou-Jen) Wang participated in the discussion as this work will be the basis of his thesis. MS student Havish Nallapareddy also participated, and later presented his preliminary results on a pre-fall detection algorithm on a visit to the Shirley Ryan AbilityLab the next day.



Photo'd: Dr. Mark Albert and Steve Wang

# Student News

## Gloria Kim Attends IEEE North Tech Competition



Gloria Kim

Gloria Kim received third place for the undergraduate poster competition. Her research helps to prevent data breach and consequential costs by providing a secure platform for sensitive data. Kim hopes to apply batch normalization for machine-learning models built using a technique called homomorphic encryption, which allows computation that draws on encrypted data, so even if data is leaked to a third-party during transmission, the data cannot be decrypted and thus never exposed to anyone other than authorized users.

## Mohammadreza Robaei Attends IEEE North Tech Competition

Robaei's research presented at the conference is about Millimeter-wave massive MIMO, explicitly focusing on channel estimation and channel tracking. In this poster presentation, he presented the basics and challenges of mmWave frequency bands, massive MIMO, and methods for channel estimation and channel tracking.



Mohammadreza Robaei

## Eagle Call - Upcoming Events

- Scholarships and Sponsorships for Conferences are **NOW OPEN**:
  - ACM Richard Tapia Celebration of Diversity in Computing Conference-Apply [here](#)
  - Grace Hopper Celebration Women of Color in Technology– Apply [here](#)
  - Grace Hopper Celebration of Women in Computing– Apply [here](#)

## “Git” Informed- Did You Know?

- Computer Science and Engineering is one of the biggest departments at UT.
- Tandy TRS-80 Model I computer radiated so much interference that many games were designed so that an AM radio next to the computer could be used to provide sounds.
- 4004 was the name given to the first microprocessor by Intel.

## Faculty News

### Service Award Recipients



Pictured L to R: Dr. Mark Thompson, Dr. Barrett Bryant, and Eduardo Blanco

Five of our incredible CSE faculty were honored March 3, 2020, for reaching service milestones at UNT.

#### **5 years of service:**

Eduardo Blanco and Mark Thompson (pictured far left and right respectively with Chair Barrett Bryant.)

#### **15 years of service:**

David Keathly and Saraju Mohanty (not pictured.)

#### **30 years of service:**

Farhad Shahrokhi (not pictured.)

# 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 3<sup>rd</sup> dimension – year she was born. Consider a 3<sup>rd</sup> 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

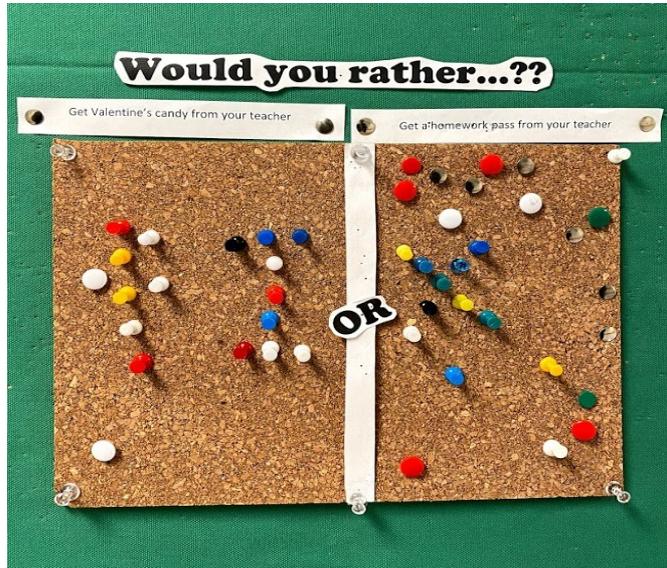
Please email [Nagendra.gulur@unt.edu](mailto:Nagendra.gulur@unt.edu) for puzzle ideas and solutions to posted puzzles. Please start the subject line of your email with "PUZZLE:".

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



# Would You Rather?

The February 2020 winner is:



Don't forget to stop by the bulletin board located in Route 66 and cast your vote for March's Would You Rather: Find a four-leafed clover that really brought good luck or find a pot of gold?