

# CSE NEWSLETTER: A LOOK INSIDE THE DEPARTMENT

## Message from the Chair

Happy fall guarter everyone. We are back, mostly in person, sometimes hybrid, but always excited to educate the thought leaders of a digital tomorrow.

During the depths of the pandemic, it was hard to imagine the flurry of activity happening now. We reopened the building and welcomed back students, staff and faculty. We gathered again in classrooms and outdoor and hybrid spaces, working together towards a brighter future, carried by our passions for education, research and positive impact on our community. We even revived several treasured CSE traditions,



Sorin Lerner

including the Beginning of the Year Celebration and the CSE Social Hour - this year with pumpkin carving (See pictures below).

As we get ready for the end of the quarter, we are working on a fresh lineup of speakers for our Twitch LiveStream, starting with Ariana Mirian on Nov 18 at 6:30 pm Pacific. Ariana is a PhD student who works on security and privacy. We will talk about what it takes to be successful in learning, teaching and research, as well as security and privacy, Grace Hopper and parrying rapid-fire questions. Make sure to follow our <u>CSE Twitch account</u> to be notified when we go live.

Thank you for your perseverance, hard work and dedication to excellence. Wherever you are, whoever you are, you are part of our bigger community. As always, I encourage you to reach out to me personally.

Sorin Lerner, CSE Department

#### Chair

Stay connected with CSE by following our <u>Twitter</u>, <u>Facebook</u>, <u>LinkedIn</u> and <u>Instagram</u> feeds. If you have news to share, story ideas or comments for our CSE Communications Team, please send them to csecommunications@eng.ucsd.edu.

# CSE NEWS

## Making Voice Assistants Accessible for Older Patients

Emilia Farcas in the Qualcomm Institute, Nadir Weibel in the Human-centered eXtended Intelligence Research Lab and other researchers in CSE and the Department of Medicine programare investigating how older adults are using (or not using) voice assistants and how that technology can be improved. The team recently began testing a new generation of health care-focused voice assistants in homes.

#### CSE Researchers Receive NSF Support To Make Browsers Safer

Deian Stefan, Ranjit Jhala and Sorin Lerner are part of a \$3 million grant from the National Science Foundation to make web browsers safer. The team will focus on securing JavaScript just-in-time (JIT) compilers, which transform JavaScript web application code into optimized machine code.

#### Rose Yu Heads Major Scientific Machine Learning Project

Researchers at UC San Diego, UC Irvine and Columbia University have received a \$3.6 million Department of Energy grant to develop new machine learning methods to understand climate data and predict its ramifications on a warming world.

## Passing the Test of Time, Again

William Griswold has received his second test of time award for groundbreaking work. This time, he was honored by the Association Internationale pour les Technologies Objets (AITO) for his 2001 paper on the AspectJ programming language, an aspect-oriented Java extension.

#### Undergrad Mckenna Lewis Featured in CRA's Conquer

McKenna Lewis received an honorable mention for the 2021 CRA Outstanding Undergraduate Researchers award. Lewis is a computer science major and an undergraduate researcher in the UCSD School of Medicine.









# Farewell to the Garys

We are saddened to announce the simultaneous retirement of Gary Cottrell and Gary Gillespie. Machine learning is benefiting the world, and Gary Cottrell is one of the people we can thank for that. Cottrell has been advancing neural networks for 40 years. His first paper, Toward Connectionist Parsing, was published in 1982. Fortunately, Cottrell is phasing into retirement and will still be around.

William Griswold

Gary Gillespie started as a tutor in 1986 and a lecturer in 1994. He has mentored 694 tutors and 19 teaching assistants, has written 368 letters of recommendation and has been honored with a campus-wide Academic Integrity Award, Best Teacher award from UCSD's Panhellenic Society and a Teacher of the Year award. Gillespie is leaving CSE to become senior director of engineering at iBoss.

## A Brief History of Minimal Surfaces and the Ants that Love Them

Mathematicians have been looking for better ways to calculate minimal surfaces for hundreds of years. Recently, Albert Chern and postdoctoral researcher Stephanie Wang added a new page to this book with their paper: Computing Minimal Surfaces with Differential Forms, which was recently published by ACM.

## Researchers Find Low-Performing CS Students Face Many Struggles

CSE Researchers have completed a student experience survey to study which factors impact student success in early computing courses. They found lower performers report higher stress in several areas, indicating struggling students face headwinds on many fronts.

#### UC Adopts Recommendations for Responsible AI

The University of California has established principles for artificial intelligence (AI), as well as governance processes, that prioritizes transparency and accountability for AI deployment. CSE faculty Nadia Henninger and Lawrence Saul, along with Camille Nebeker, who co-founded and directs the Research Center for Optimal Digital Ethics Health, contributed to these guidelines.

#### GradWIC Wins International Award to Boost Diversity

UC San Diego's Graduate Women in Computing organization (GradWIC) is one of seven groups selected for this year's Xilinx Women in Technology University Grant Program. GradWIC works to increase representation and participation in computing for women and underrepresented minorities.



Gary Cottrell

Gary Gillespie receiving Academic Integrity Award

## NOTEWORTHY

Congrats to Alisha Ukani, who was recently honored with a \$10,000, 2021-22 ARCS Foundation Fellowship Award.

Manmohan Chandraker has received a Google Award for Inclusion Research to support his work on fairness and equity in computer vision.

Laurel Riek is on Robohub's 2021: list 50 Women in robotics you need to know about.

Ndape Nakashole has been honored as one of the top African women studying AI.

CSE PhD student Jennifer Chien recently received a Graduate Fellowship for STEM Diversity.

Soroush Ghodrati, a PhD student in Hadi Esmaeilzadeh's group, was recently awarded a Google PhD Fellowship in systems and networking.

Rajesh Gupta was quoted in the San Diego Union Tribune article: Can San Diego carve out a place in race for artificial intelligence innovation?

Senior Eman Sherif has received a \$5,000 scholarship from SIM San Diego.

CSE alum Jason Oberg, Tortuga Logic's co-founder and CTO, was recently awarded a 2021 Design Automation Conference Under-40 Innovators Award.



Manmohan Chandraker

Ndape Nakashole

Jennifer Chien

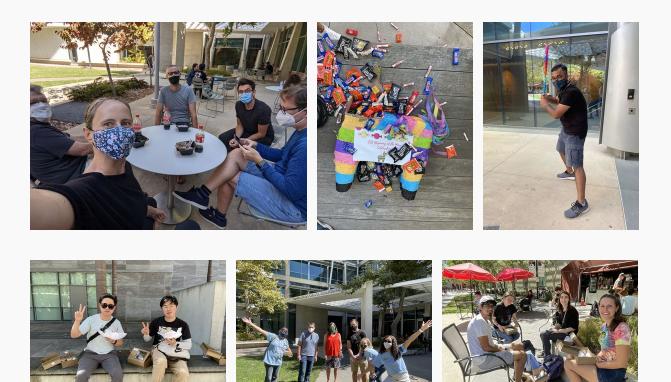
# THE GREAT PUMPKINS

To celebrate Halloween, we brought back the CSE Social Hour, including some truly inspirational pumpkin carving.



**RETURN TO LEARN** 

We're back, yay.



WE ARE CSE

At the Autonomous Vehicle Lab, I work on designing robust strategies for autonomous driving in urban environments such as the UCSD campus. My research interests include developing dynamic scene models that can be deployed in real-time for micro-mobility applications.

**DAVID PAZ RUIZ** PhD Student



**#WEARECSE** 

# CENTER FOR NETWORKED SYSTEMS

## ACM Internet Measurement Conference

The annual ACM Internet Measurement Conference (IMC), which focuses on Internet measurement and analysis, accepted 55 papers this year, and 16 were from UC San Diego authors - nearly 30% of the total.

Of the 16, seven were submitted by CNS and CSE Systems and Networking Group; three had CAIDA authors; UCSD undergrad Katherine Izhikevich co-authored one; and one was submitted by Sysnet Ph.D. student Rukshani Athapathu. Four were submitted by UCSD Ph.D. or postdoc alumni.

A big congratulations to the UC San Diego and CNS authors who contributed to 2021 ACM IMC papers: Gautam Akiwate, Rukshani Athapathu, Kimberly Claffy, Alberto Dainotti, Alexander Gamero-Garrido, Katherine Izhikevich, Dhananjay Jagtap, Enze Liu, Alexander Marder, Ariana Mirian, Ricky Mok, Ramakrishna Padmanabhan, Audrey Randall, Stefan Savage, Aaron Schulman, Alex C. Snoeren, Alisha Ukani, Geoffrey M. Voelker, Huanlei Wu, Alex Yen, Zesen Zhang and Hongyu Zou. The 2021 ACM IMC was held virtually from November 2 to 4.



Alisha Ukani



Ariana Mirian



Ramakrishna Padmanabhan

# **CSE VIDEO HIGHLIGHT**

An oldie but a goodie on the CSE YouTube channel: Grad School by UCSD/Lambda Style Productions.



Let us know what's newsworthy. We want to hear from you about the projects and people (including students) we should include in newsletters, articles and the CSE website. Let us know what's up at <u>cse-communications@eng.ucsd.edu</u>.

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