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Northwestern | McCORMICK SCHOOL OF
ENGINEERING

Computer Science

IN THIS ISSUE // September 19, 2025 / Bulletin #1

Upcoming Seminars

CS Events

Northwestern Events

News

IMPORTANT DATES & REMINDERS

Friday, September 26, 2025 *Last day to request academic accommodations for religious observance in Fall Quarter*

Friday, October 24, 2025 *Application for degree due to TGS to receive a degree in Fall*

Monday, November 3, 2025 *Pre-registration for Winter quarter begins*

Monday, November 10, 2025 *Registration for Winter quarter begins*

Wednesday, November 26, 2025 *University offices close at 5:00 pm for Thanksgiving break*

Friday, December 5, 2025 *Master's completion form due for TGS Fall master's candidates*

Monday, December 8, 2025 *Fall Exams begin*

Monday, December 15, 2025 *Grades due 3:00 PM*

Friday, December 19, 2025 *Fall 2025 Degrees Conferred*

Wednesday, December 24, 2025 *Winter Recess Starts - University Closed Through January 1st, 2026*

We want to hear from you!

Please send any upcoming news and events to news@cs.northwestern.edu to be included in future bulletins &/featured on our socials/website.

Events for the bulletin must be emailed by Thursdays 12PM to be in that Friday's bulletin.

Missed a seminar? No worries!

View past seminars via the Northwestern CS Website
(northwestern login required).

[View Past Seminars »](#)

UPCOMING SEMINARS

September

29th - Zoe Hitzig

October

1st - Lane Gunderman

15th - Jason Hartline

November

3rd - Aloni Cohen

10th - Aravindan Vijayaraghavan

19th - Robert Rand



Designing Quantum Codes using Physics Constraints

Lane Gunderman, University of Illinois-Chicago

Abstract

Quantum computers are widely believed to enable massive computational speedups for certain tasks. The downside to quantum computers, due to their very nature, is that they require having reliable information that is extremely susceptible to noise. For this reason quantum error-correction is expected to be needed to perform reliable computations. In this talk I will discuss my work in improving the quality of error-correction through two different approaches. Firstly designing around different platform's qubit characteristics, such as mobility. Secondly, as many qubit devices are a simplification of the physics underlying these systems, I have developed methods for generating quantum error-correcting codes which are perhaps more suitable for these systems and can better leverage the true dynamics of the system.

Biography

Lane is originally from Chicago (or Evanston depending on the year). He obtained Bachelor degrees in physics and math from MIT, then obtained his PhD from the Institute for Quantum Computing (IQC) at the University of Waterloo in Canada in the Fall of 2022. He then worked at Xanadu Quantum

Technologies for about a year, then joined HRL for half a year, before joining UIC's ECE department, in the Fall of 2024.

🕒 **Wednesday, October 1, 2025**
12:00 PM - 1:00 PM CT

📍 **Mudd Hall, 3514,**
2233 Tech Drive, Evanston, IL 60208

[More Information »](#)



Scoring Rules for a Theory of AI

Jason Hartline, Northwestern University

Abstract

Scoring rules are foundational in decision theory and, therefore, are foundational for a developing theory of artificial intelligence. Just as simple models from decision theory provide context for understanding the decisions of complex humans, so too can they for complex AI systems. Bayesian decision theory considers an agent receiving a signal that is correlated with the state, choosing an action, and obtaining a payoff that depends on both the state and action. With Bayesian updating and the revelation principle, the signal becomes a posterior belief and the decision problem becomes a scoring rule. Given a scoring rule, baseline performance is the optimal score under the prior; benchmark performance is the optimal score under the posterior; and the optimal scoring rule — framed as a mechanism design problem — maximizes the difference between them. The talk reviews this theory and applies it to evaluate the value of information, the losses from predictive models, and the accuracy of human and AI decision makers.

Biography

"Prof. Hartline's research introduces design and analysis methodologies from computer science to understand and improve outcomes of economic, legal, and AI systems. Optimal behavior and outcomes in complex environments are complex and, therefore, should not be expected; instead, the theory of approximation can show that simple and natural behaviors are approximately optimal in complex environments. This approach is applied to auction theory and mechanism design in his graduate textbook Mechanism Design and Approximation which is under preparation.

Prof. Hartline received his Ph.D. in 2003 from the University of Washington under the supervision of Anna Karlin. He was a postdoctoral fellow at Carnegie Mellon University under the supervision of Avrim Blum; and subsequently a researcher at Microsoft Research in Silicon Valley. He joined Northwestern University in 2008 where he is a professor of computer science. He was on sabbatical at Harvard University in the Economics Department during the 2014 calendar year and visiting Microsoft Research, New England for the Spring of 2015. He was on sabbatical at Stanford University for the 2023-2024 academic year.

Prof. Hartline is the director of Northwestern's Online Markets Lab, he was a founding codirector of the Institute for Data, Econometrics, Algorithms, and Learning from 2019-2022, and is a cofounder of virtual conference organizing platform Virtual Chair."

🕒 **Wednesday, October 15, 2025**
12:00 PM - 1:00 PM CT

📍 **Mudd Hall, 3514,**
2233 Tech Drive, Evanston, IL 60208

[More Information »](#)

CS Department Events

NITMB-IDEAL FALL 2025 KICKOFF EVENT

Date: Monday, October 6th 2025

Location: NITMB (The National Institute for Theory and Mathematics in Biology) (875 N. Michigan Avenue, 35th floor, Chicago, Illinois) (Suite 3500)

Building Entrance: 172 E Chestnut St suite 3500, Chicago, IL 60611

Parking and Transportations: <https://www.nitmb.org/getting-here>

Registration: https://docs.google.com/forms/d/e/1FAIpQLSexnDf-PS7bIBrmiMp9rbD-bZ_8KGrQMHqUF7VLyqdv53V08w/viewform

🕒 **Monday, October 6, 2025**
9:30 AM - 4:00 PM CT

📍 **NITMB (The National Institute for Theory and Mathematics in Biology) (875 N. Michigan Avenue, 35th floor, Chicago, Illinois) (Suite 3500)**

[More Information »](#)

DATA WAREHOUSING: THE INDUSTRIAL PERSPECTIVE | ACM CHICAGO TALK

Join us in Mudd 3514 for a presentation by Henrietta Dombrovskaya, ACM Chicago Chapter Communications Chair and Illinois Prairie Postgres User Group Organizer for an abbreviated version of the Data Warehousing: The Industrial Perspective tutorial. The presentation will be followed by a Q&A and information about the Northwestern ACM Chicago Student Chapter.

🕒 **Tuesday, October 7, 2025**
6:00 PM - 7:00 PM CT

📍 **Mudd Hall, 3514,
2233 Tech Drive, Evanston, IL 60208**

[More Information »](#)

CS PUBLIC LECTURE

The Computer Science department invites you to a free public lecture on October 29, 2025. The lecture will begin at 4:00PM in Cohen Commons.

Further details regarding topic and how to register will be shared in the upcoming weeks.

🕒 **Wednesday, October 29, 2025**
4:00 PM - 6:00 PM CT

📍 **Technological Institute, Cohen Commons,
2145 Sheridan Road, Evanston, IL 60208**

[More Information »](#)

Other Events

NORTHWESTERN 2025 TECH CAREER FAIR

Co-hosted by Department of Computer Science, Department of Electrical and Computer Engineering and Engineering Career Development Office

Join us for the Northwestern 2025 Fall Tech Career Fair, a collaborative in person career fair, connecting you with employers looking for talented students in computer science, data science, computer engineering, electrical engineering, machine learning, and similar programs. This is a great opportunity for you to learn, network and possibly be recruited with various industries. This fair is open to undergraduate, Masters and PhD students for internship, co-ops, and full-time positions.

Registrations for this event will be handled through Handshake, please click [here](#) to get started!

Pre-registration is preferred but students will be given access on the day of the event.

Wildcards will be required for all attendees.

Professional Business Attire recommended (No Jeans, Joggers, Sweats/Sweatshirts, or T-Shirts, please)

Check back regularly to see which companies are coming! List is subject to change.

- Conduct company research to better familiarize yourself with companies.
- Search McCormickConnect and Handshake for available positions and apply for the position(s) ahead of time so companies know you're interested.
- Be prepared and be ready with your "elevator pitch".
- Bring copies of your resume and business cards! Resume should be uploaded into McCormickConnect

Engineering Career Development (ECD is here to assist as you prepare for the fair. You can schedule an appointment in [McCormickConnect](#) to meet with your dedicated career advisor.

Additional questions, please contact:

Engineering Career Development (ECD) Office

Ford Motor Engineering and Design Center, First Floor, 1.200

847.491.3366

ecd@northwestern.edu

 **Friday, September 26, 2025**
12:00 PM - 4:00 PM CT

 **Norris University Center, Norris University Center, 1999 Campus Drive, Evanston, IL 60208**

[More Information »](#)

THE 2025 CIERA ANNUAL PUBLIC LECTURE: A NEW EYE ON THE UNIVERSE OPENS: THE VERA C. RUBIN OBSERVATORY

Each year, Northwestern University's Center for Interdisciplinary Exploration and Research in Astrophysics (CIERA) invites a renowned speaker to campus for our Annual Public Lecture. This year's speaker is Harvard astronomer and experimental physicist Professor Christopher W. Stubbs. This year marks the birth of an ambitious new scientific project. Based in Chile, the Vera C. Rubin Observatory will take a decade-long time-lapse movie of the entire Southern sky, using the largest digital camera ever made. First-look images were released this summer, and the project is now transitioning into full operation.

Professor Stubb's talk will describe how the unprecedented torrent of 20 terabytes per night will propel projects ranging from searches for potentially hazardous asteroids to mapping out the history of cosmic expansion. In particular, the Rubin data will provide new insights into "dark matter," the mysterious substance that comprises 90% of the mass in our own Milky Way galaxy, as well as "dark energy," which is driving the runaway expansion of the Universe. Stubbs will also describe the evolution of the project itself, and the romance of working in the high Atacama desert. This event is generously

supported by The Alumnae of Northwestern University. If you have any questions about this event, or would like to make an accessibility request (eg. ASL interpretation), please contact ciera-events@northwestern.edu.

For those unable to make it to Evanston, the lecture will be livestreamed on CIERA's website: <https://ciera.northwestern.edu/ciera-livestream/>

🕒 **Friday, October 3, 2025**
7:00 PM - 8:15 PM CT

📍 **Technological Institute, Ryan Family Auditorium, 2145 Sheridan Road, Evanston, IL 60208**

[More Information »](#)

CS News



Wearable Sensors Could Reshape Obesity Treatment

A team led by Professor Nabil Alshurafa developed a groundbreaking lifestyle medicine program that uses three wearable sensors to capture real-world overeating behavior, providing a foundation for personalized interventions.

[***Read More***](#)



Northwestern Engineering Names Winners of 2025 Cole-Higgins Awards

Joshua D'Arcy, Izzy Grosos, Jeremy Keys, Amjed Shafique, and Robert Linsenmeier received the school's annual awards for outstanding teaching and advising.

[Read More](#)



Law Schools Embrace AI

It's not clear how generative AI will reshape the job market for new lawyers in the coming years, but Professor Dan Linna Jr. told Inside Higher Ed that law schools are increasingly focused on deepening students' understanding of the technology's potential and limitations.

[Read More](#)



Northwestern Department of Computer Science
Mudd Hall, 2233 Tech Drive, Third Floor
Evanston, Illinois 60208

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