Northwestern | **McCORMICK** SCHOOL OF **ENGINEERING**

Computer Science

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IMPORTANT DATES & REMINDERS

Monday, January 5, 2026 Winter classes begin

Friday, January 16, 2026 Last day to request academic accommodations for religious observance in Winter Quarter

Monday, January 19, 2026 No classes- Martin Luther King Jr. Day

Friday, February 6, 2026 Application for degree due to The Graduate School to receive a degree in Spring

Friday, February 13, 2026 Last day to drop a FULL-TERM class for Winter in CAESAR.

Monday, February 16, 2026 Pre-registration for Spring quarter begins

Monday, February 23, 2026 Registration for Spring Quarter begins

Saturday, March 14, 2026 Winter classes end

Monday, March 16, 2026 Winter exams begin

Saturday, March 21, 2026 Spring Break Begins

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

January
14th - Heng Ji
29th - Public Lecture Series

February
2nd - Xiaorui Sun
25th - Austin Mordahl

Towards Creative Intelligence
Heng Ji, UIUC

Abstract:
Human creative intelligence can be traced back at least 3.3 to 3.4 million years, as early humans used tools to manipulate their surroundings and, eventually, to create fire. Across both the macro- and microscopic worlds, we routinely look beyond surface appearances, break complex artifacts into their functional components, and recombine those components to create novel designs. For instance, if we want to design a new chair with built-in storage, we might add a component analogous to a drawer. Likewise, if a drug molecule lacks adequate solubility, we can pinpoint the substructures responsible for this

limitation and replace them with more suitable building blocks. Unfortunately, while large language model (LLM)-based agents have greatly advanced analytical intelligence through problem solving, and simulation environments emphasize practical intelligence by testing the application of knowledge in realistic settings, creative intelligence (i.e., the ability to generate novel and useful ideas and solutions) remains a moonshot goal. In this talk, I will introduce a "decompose and reassemble" framework that enables large multimodal models to automatically break down real-world objects into distinctive, function-specific components and then use these components to perform fine-grained, compositional reasoning and generation. I will demonstrate how this framework supports the design of novel artifacts in the macro world and the creation of effective, synthesizable medicines in the micro world.

Biography:
Heng Ji is a Professor of Computer Science at Siebel School of Computing and Data Science of University of Illinois Urbana-Champaign. She is the Co-Founder and CTO of Medicas AI, a company focusing on patient-centric AI for Drug Discovery. She is the Founding Director of Amazon-Illinois Center on AI for Interactive Conversational Experiences (AICE), and the Founding Director of CapitalOne-Illinois Center on AI Safety and Knowledge Systems (ASKS). She is a faculty member affiliated with Electrical and Computer Engineering Department, Coordinated Science Laboratory, and Carl R. Woese Institute for Genomic Biology of University of Illinois Urbana-Champaign. She is named as an Association for Computational Linguistics (ACL) Fellow in 2025 for her "significant contributions to information extraction, multimodal and multilingual knowledge extraction and AI for science." She received her Ph.D. in Computer Science from New York University under the supervision of the ACL Lifetime Achievement Awardee Prof. Ralph Grishman, and B.A. and M.A. in Computational Linguistics from Tsinghua University. The other awards she received include Outstanding Paper Award at ACL2024, two Outstanding Paper Awards at NAACL2024, "Young Scientist" by the World Laureates Association in 2023 and 2024, "Young Scientist" and a member of the Global Future Council on the Future of Computing by the World Economic Forum in 2016 and 2017, Amazon Scholar 2020-2025, "Women Leaders of Conversational AI" (Class of 2023) by Project Voice, "AI's 10 to Watch" Award by IEEE Intelligent Systems in 2013, NSF CAREER award in 2009, PACLIC2012 Best paper runner-up, "Best of ICDM2013" paper award, "Best of SDM2013" paper award, ACL2018 Best Demo paper nomination, ACL2020 Best Demo Paper Award, NAACL2021 Best Demo Paper Award, Google

Research Award in 2009 and 2014, IBM Watson Faculty Award in 2012 and 2014 and Bosch Research Award in 2014-2018. She has given many keynote speeches at top conferences including IJCAI2025 and EMNLP2025. She was invited to testify to the U.S. House Cybersecurity, Data Analytics, & IT Committee as an AI expert in 2023. She was invited by the Secretary of the U.S. Air Force and AFRL to join Air Force Data Analytics Expert Panel to inform the Air Force Strategy 2030, and invited to speak at the Federal Information Integrity R&D Interagency Working Group (IIRD IWG) briefing in 2023. She is the lead of many multi-institution projects and tasks, including the U.S. ARL projects on information fusion and knowledge networks construction, DARPA ECOLE MIRACLE team, DARPA KAIROS RESIN team and DARPA DEFT Tinker Bell team. She has coordinated the NIST TAC Knowledge Base Population task 2010-2020. She served as the associate editor for IEEE/ACM Transaction on Audio, Speech, and Language Processing, and the Program Committee Co-Chair of many conferences including NAACL-HLT2018 and AACL-IJCNLP2022. She was elected as the North American Chapter of the Association for Computational Linguistics (NAACL) secretary 2020-2023. Her research has been widely supported by the U.S. government agencies (DARPA, NSF, DoE, ARL, IARPA, AFRL, DHS) and industry (Amazon, CapitalOne, Adobe, IBM, Google, Bosch, Disney).

🕐 **Wednesday, January 14, 2026**
   12:00 PM - 1:00 PM CT

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

More Information »

CS Department Events

RECOMMENDER SYSTEMS FOR LOCAL JOURNALISM

You are invited to Recommender Systems for Local Journalism! This talk traces the evolution of recommender systems from early heuristics and matrix factorization to modern learning-to-rank and LLM-enhanced approaches, then looks ahead to where the field is going. After a brief cross-domain survey, the

focus narrows to news and local-news recommenders. Payam, a leading contributor to emerging research on recommender systems for local news, will present his recent research and a forward-looking vision for how tailored recommender systems can help revitalize local journalism and support more informed, engaged communities.

Bio:
Payam Pourashraf works on the Advanced Capabilities (R&D) team at a financial company in Illinois. With a background spanning software, hardware, and computer science, he brings a full-stack perspective to his work. His recent academic research focuses on recommender systems for news, with a particular emphasis on supporting local journalism.
Beyond his industry role, Payam is committed to growing the region's technical community as the elected Vice-Chair of ACM Chicago. He is also passionate about education, having spent five years as an adjunct faculty member at DePaul University, where he taught more than 30 course offerings in Python and applied data science.

🕐 **Wednesday, January 14, 2026**
6:00 PM - 7:00 PM CT

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

SAVE THE DATE: WINTER PUBLIC LECTURE SERIES

More Details to Come

🕐 **Thursday, January 29, 2026**
4:00 PM - 5:00 PM CT

📍 **TBA**

Other Events

TEACHXPERTS: TEACHING "AI, RACE, AND THE FUTURE OF HUMANITY"

How is artificial intelligence (AI) shaping our social systems and our understanding of race? How will it continue to influence our relationships with technology and each other? In the first-year seminar, "AI, Race, and the Future of Humanity", students explore the impact of AI on human society while gaining practical, hands-on experience testing AI tools for research, data analysis, and scholarly communication. Join us for a conversation with Professor of Black Studies Sylvester Johnson while he reflects on the challenges and successes of treating AI as both an object of critical study and a set of tools for empowered, ethical action.

Register for this event through **EventCat**

🕐 **Thursday, January 22, 2026**
   2:00 PM - 3:00 PM CT

📍 **Virtual**
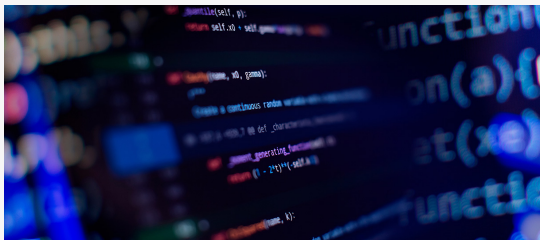
CS News

Luijten Named New Northwestern Provost

Erik Luijten, a McCormick associate dean and professor, will become Northwestern's chief academic officer, succeeding Kathleen Hagerty.

Read More

Competitive Programming Team Advances to 2026 ICPC North America Championship

Northwestern students wrestled with high-pressure problems at the Mid-Central Regional International Collegiate Programming Contest held in November.

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Northwestern CS Announces Fall 2025 Outstanding Teaching Assistant and Peer Mentors

The quarterly department awards recognize exceptional service to the CS community.

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