

Looking Back on 2024

Dear colleagues:

I feel this was the year when computer science arrived.

Computer scientists earned **Nobel Prizes** in physics and chemistry for impactful contributions to the fields of machine learning and artificial intelligence. Many of these new technologies in turn rely on heavy use of both graphics processing units as well as algorithms for data cleaning, storage, and processing. Computing is at the heart of the revolutions that are advancing every scientific discipline.

This is a big moment for our department as well. This fall, I prepared a presentation for the **McCormick Advisory Council**, a strategic team that provides counsel to Northwestern Engineering's dean to ensure continuing excellence in all areas of engineering research, education, and practice. I felt that a report on this investment was due, as it has been eight years since Northwestern announced the **Computer Science Growth Initiative** and almost six years since I accepted the offer to join Northwestern as the **Peter and Adrienne Barris Chair of Computer Science**.

Computer Science Growth Initiative, 2016 – 2024



Northwestern Computer Science has hired 36 new faculty — 20 tenure track and 16 teaching/clinical track — in the last eight years. In addition, we launched many new academic programs, including the **Master of Science in Artificial Intelligence**, the joint **MBAi program** with Northwestern's Kellogg School of Management, a new **minor in artificial intelligence**, the **Machine Learning and Data Science Minor** in partnership with the Department of Industrial Engineering and Management Sciences, and the **Computer Science and Learning Sciences PhD program** with Northwestern's School of Education and Social Policy.

As a result of these investments, our ranking has moved up significantly and the size of our PhD program has doubled. We added several new chaired professorships, a **research track** for undergraduate students, and eight optional **computer science major concentrations** to help focus students' academic pursuits. Importantly, we have also invested in building critical partnerships with many schools at Northwestern as well as multi-institution partnerships via new research centers, such as the **Center for Foundation Models and Generative AI**, the **Institute for Data, Econometrics, Algorithms, and Learning**, and the **Center for Advancing Safety of Machine Intelligence**, a collaboration with the **UL Research Institutes' Digital Safety Research Institute**.

Meanwhile, our faculty have won a variety of **awards**. Most of our junior faculty have earned US National Science Foundation **Faculty Early Career Development Program** (CAREER) awards.

Northwestern to Lead \$20 Million National AI Research Institute in Astronomy



Jointly funded by the US National Science Foundation (NSF) and the Simons Foundation, the new **NSF-Simons AI Institute for the Sky** (SKAI) unites 83 team members across 25 partner organizations to develop AI tools and accelerate astronomy's data-driven revolution. The Northwestern Engineering SKAI team includes director **Vicky Kalogera**, co-principal investigator **Aggelos Katsaggelos**, CS faculty members **Emma Alexander**, **Jessica Hullman**, **Han Liu**, **Aravindan Vijayaraghavan**, and CS affiliate **Ermin Wei**.

Fall Tech Career Fair Welcomes More than 40 Companies



In October, we co-hosted an exciting **Tech Career Fair** with the **Department of Electrical and Computer Engineering** and the **Engineering Career Development** office. Co-organized by Professors **Anastasia Kurdia** and **Chris Riesbeck**, more than one thousand undergraduate and graduate students in computer science, computer engineering, data science, electrical engineering, machine learning, and related disciplines met with recruiters from more than 40 companies.

Welcoming New Faculty



(From top, L) Anjali Agarwal, Karan Ahuja, Joshua D'Arcy, Edith Elkind, Dietrich Geisler, Manling Li, Dmitrii Pasechnik, Kate Smith, Yiji Zhang


Our department has continued its growth plans with the hiring of several new faculty members. Our new faculty include Ginni Rometty Professor of Computer Science **Edith Elkind**, core tenure-track faculty members **Karan Ahuja**, **Manling Li**, and **Kate Smith**, clinical assistant professor **Joshua D'Arcy**, research professor **Dmitrii Pasechnik**, and faculty of instruction **Anjali Agarwal**, **Dietrich Geisler**, and **Yiji Zhang**.

We were proud to welcome CS alum Sanjay Sood ('02, PhD '07), senior vice president and chief technology officer at CDW, to address Northwestern Engineering's Class of 2024 during the **PhD Hooding and Master's Degree Recognition Ceremony**.

I am also delighted that our programming team qualified for the **2025 ICPC North America Championship**. Congrats to them!

This is a proud moment, and a time to express thanks to our entire Northwestern CS team of faculty, staff, and students — especially our associate chairs — who have worked so hard to move the department forward and make my job so easy!

Best wishes for a happy and healthy holiday season,



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