



## LETTER FROM THE FACULTY LEADERSHIP

Dear Member,

It is with great pleasure that we present to you the 2024-25 Annual Newsletter of the Princeton NextG Corporate Affiliate Program (CAP), a testament to the successful collaboration between you, your company and Princeton University over the past year. We want to thank you for the vital role that you played in shaping the activities and outcomes of the program, providing industry insight, guidance, and participating in our programmed events and activities.

We launched the Princeton NextG CAP in November 2023, with ambitious plans to provide you and our other Members with meaningful engagements, and to create impactful opportunities for both our Members and the Princeton community. Buoyed by the first two years' successes, we look to provide you with more opportunities to participate and engage with Princeton faculty and students.

Please review this newsletter for more details of the impact of this past year, and visit the NextG [Members-only portal](#) for exclusive materials and session recordings.

### Virtual Kick-Off - RSVP

Join us for our kick-off virtual meeting on November 13th, 2025 at 10AM EST by RSVPing to [nextg@princeton.edu](mailto:nextg@princeton.edu) to receive the Zoom invitation.

### Membership Renewals

Renew your membership in Princeton NextG by emailing [nextg@princeton.edu](mailto:nextg@princeton.edu).

## Member Companies

*We are proud to acknowledge the member organizations for the 2024 -25 program year:*

American Tower

Ericsson

Intel

InterDigital

JMA Wireless

Keysight Technologies

MediaTek

Nokia Bell Labs

Qualcomm

Samsung Research America

Skyworks

Texas Instruments

Verizon

# Program Activities / 2024 – 2025 Recap

Throughout the year, we have focused on delivering you high-value opportunities to engage with faculty, students, and other members. The program's activities are designed to foster discussions around a broad range of next generation wireless communication research, seed new projects and engage with talent development, and we are delighted to report a strong level of participation across the board.

## #1. Annual Symposium

The NextG Annual Symposium, held on May 1, 2025, served as the year's premier event, convening a distinguished group of academic leaders, industry experts, and students for a day dedicated to knowledge exchange and collaboration. Participants engaged in thought-provoking keynote presentations, in-depth panel discussions, and interactive sessions that fostered meaningful dialogue and inspired innovative ideas.

The event opened with keynotes by Peter Vetter of Nokia Bell Labs and Ari Fitzgerald of Hogan Lovells, who shared insights on future network technologies and U.S. spectrum policy developments. A morning panel on NextG Policy and Technology Frontiers featured experts from American Tower, Ericsson, Keysight, Cohere, and Princeton discussing the evolving landscape of wireless infrastructure and innovation.

The afternoon showcased faculty flash talks highlighting breakthrough research from Princeton scholars, including



projects on connected intelligence and next-generation network design. Doru Calin of MediaTek followed with a keynote on key 6G technologies shaping user experiences, setting the stage for a fireside chat with Erwin Gianchandani of the National Science Foundation.

The symposium concluded with a panel on AI's role in 6G development, featuring leaders from Verizon, Qualcomm, Intel, JMA Wireless, and Samsung, and wrapped up with awards, networking, and lab tours.

As a flagship event of the program, the Symposium continues to serve as a central forum for advancing research, promoting innovation, and strengthening connections across the NextG community.



## #2. Leadership Retreat

The Leadership Member Retreat offered an exclusive opportunity for senior executives and academic leaders to convene in a focused and collaborative setting in the newly renovated Prospect House. The program fostered open and constructive dialogue aimed at strengthening partnerships between academia and industry, with a shared commitment to advancing meaningful and high-impact cooperation in the years ahead. We explored the NextG grand challenges that academia is well-positioned to address, engaging in in-depth discussions on the intersection of technology, spectrum, and policy—key areas that have the potential to advance U.S. leadership and competitiveness in NextG innovation.



## #3. NextG Distinguished Seminar Series

The NextG Distinguished Seminar Series brings speakers to the Princeton University community from around the world to speak on a range of next generation wireless technology topics, including:

- Electronic-Photonic Co-Design: From Communication to Computation (Firooz Aflatooni, University of Pennsylvania);



- Solving the “Cocktail Party Problem” for Radios: Circuit and System Techniques for Mitigating Interference (Alyosha Molnar, Cornell University);
- SPECTRE: Signal Processing with Efficient Compute for Transmit and Receive Environments (Arjuna Madanayake, Florida International University); and
- Zak-OTFS for the Integration of Sensing and Communication (Robert Calderbank, Duke University).

The recordings of the on-campus seminars are available exclusively on the [Members-Only website portal](#).

## #4. NextG Faculty Spotlight Series



This past year, we provided you and other Members with exclusive spotlights on the work of some of our NextG faculty. These spotlight cutting-edge advancements in relevant fields and demonstrate the potential for industry-academia collaborations to solve pressing real-world problems. These sessions are hosted virtually and are only available to our Members and the Princeton community. Spotlights included:

- Felix Heide, Princeton Computational Imaging Lab
- Maria Apostolaki, NetΣyn lab
- Minjie Chen, Princeton Power Electronics Research lab
- Kaushik Sengupta, AI-Enabled RFIC Design

The recordings are available on the [Members-Only website portal](#).

## #5. Leadership-Directed Research Support

Leadership-level Member companies directed a portion of their fees to directly support research projects being conducted by four NextG Faculty: 1) Kyle Jamieson; 2) Paul Prucnal; 3) Yasaman Ghasempour; and 4) Kaushik Sengupta.

A reminder for Leadership Members: please contact [nextg@princeton.edu](mailto:nextg@princeton.edu) to ensure all funds are committed before the applicable deadline.

## #6. NextG Innovation Awards (Seed Grants)

The NextG membership fees fueled an internal call for proposals from faculty interested in next generation wireless communications technology projects, and broadened the interest on campus for these technologies. The call had broad appeal with 13 proposals responding from computer science, electrical and computer engineering, and civil and environmental engineering departments.

With input from Leadership-level Members, four groups received funding awards:

- **Niraj K. Jha** (ECE): *Intelligent Sensing-based Multimodal Foundation Models for*

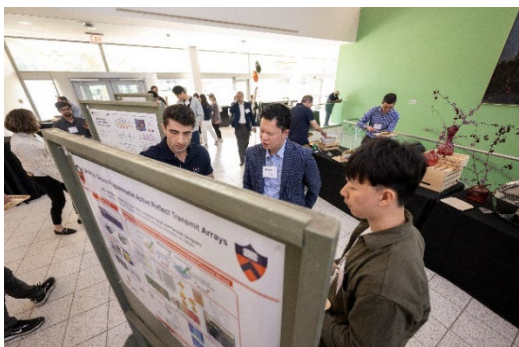
- Edge-Cloud NextG Applications (\$35,000);
- **Maria Apostolaki** (ECE): *Building Trust in ML-Based Network Applications* (\$35,000);
- **H. Vince Poor** (ECE): *Integrated Sensing and Communication with URLLC Users* (\$35,000).
- **Andrés Monroy-Hernández & Parastoo Abtahi** (CS): *Spatial Computing for All: Bridging Augmented Reality and IOT with End-User Programming Tools* (\$70,000).

## #7. Policy Paper Presented at DC Conference

Similar to last year, the program again played an active role in contributing to national discussions on policy. Our NextG policy paper was presented at the Technology Policy Research Conference (TPRC-53), September 18-20 in Washington, DC. The paper, “Maximizing NextG Benefits: A Policy Framework to Advance Spectrum Allocation, Infrastructure Investment, and Wireless Leadership”, is a collaboration between NextG faculty, NextG industry Members, and Princeton’s Center for IT Policy (CITP). The authors are Mihir Kshirsagar (CITP), Kaushik Sengupta (NextG), Mischa Dohler (Ericsson), Ed Knapp (American Tower), and Junyi Li (Qualcomm). We are proud to have presented this work at such a high-visibility forum, and we look forward to continued engagement among our community on essential issues of policy to help inform decision makers and the public. Please read the paper here: <https://dx.doi.org/10.2139/ssrn.5376343>

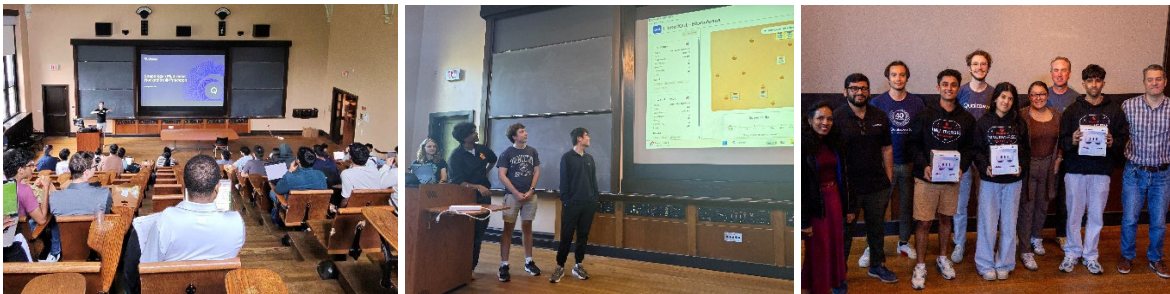
## #8. Student Engagement

Recognizing the importance of connecting our Members with emerging talent, we prioritized student engagement throughout the year. This included the development of a **Book of Resumes** from students across labs working on NextG technologies, providing Members direct access to a pool of high-potential candidates for internships and full-time roles. The **Student Poster Session**, held during the Annual Symposium, showcased the innovative research of our students, offering members a unique opportunity to engage with the next generation of researchers and innovators. Additionally, we encourage you and your company to consider taking advantage of bespoke opportunities to organize **local company site visits** to company offices or **visits to campus** to give presentations and interact directly with students.



## #9. Student Hackathon

On September 27-28, Princeton hosted a student hackathon led by Qualcomm to create new Edge AI applications and use cases based on Qualcomm's Snapdragon technology. The hackathon involved two phases, a proposal submission phase in August and early September, and an onsite build and prototype phase on the weekend of September 27<sup>th</sup>. In all, 75 students competed in 20 teams of 3-5 students each. The students created an impressive array of apps and got to learn from and work with top engineers at a leading technology company. Qualcomm also worked with Princeton's office of Career Development to expose students to hiring pathways for internships and full-time opportunities.



## # 10. Thank You Andrea, and Congratulations

Last but not least, on July 1st NextG bid farewell to co-director and engineering Dean Andrea Goldsmith as she assumed the presidency of Stony Brook University. Andrea's lifelong dedication to research and teaching in wireless engineering has been instrumental in bringing us together as an educational and industrial community, to build and shape wireless technology as a vital and expanding component of modern life. The planning for NextG happened in 2021, and since then, slowly and steadily, we have built a community of researchers and industry partners who are dedicated to addressing the fundamental challenges for the next generation of wireless and wired technologies. Thank you, Andrea, and congratulations!

### Program's Growth and Future Opportunities

Looking forward, we are excited about the potential to deepen these engagements and further expand the value of membership. In the upcoming year, we plan to introduce more **networking opportunities** between companies, faculty, and students, and expand our portfolio of events. This includes:

- **Focus at the intersection of technology and policy making** through planned workshops involving all the stakeholders—industry, government and academia.

- **Enhanced access to the “Members Only” portal**, where all program activities, updates, and opportunities will continue to be posted.
- **Local site visits** to member companies, providing students a first-hand look at real-world industry environments.
- **New workshops and roundtable discussions** with faculty and industry leaders on emerging trends in critical areas like AI, sustainability, and digital transformation.

## Kick-Off Date, Symposium Date, and Membership Expansion

The program’s official **kick-off date** for the academic year of 2025/2026 will be on November 13, 2025 at 10AM EST (contact [nextg@princeton.edu](mailto:nextg@princeton.edu) for Zoom link), to mark the start of the next operational year of Princeton NextG.

The **Annual Symposium** will be on April 30, 2026 in Princeton, followed by the **Leadership Retreat** on May 1, 2026 in Princeton.

As we plan for the year ahead, we want to encourage you to continue your participation in this vibrant program, and to help NextG grow by promoting the program to your contacts at wireless technology companies that are not yet Members of NextG. Your involvement is key to the program’s success, and we are eager to build on the momentum we’ve created together. To discuss new opportunities for engagement, please reach out to [nextg@princeton.edu](mailto:nextg@princeton.edu), with a copy to Spencer Reynolds, [spencerr@princeton.edu](mailto:spencerr@princeton.edu).

## CLOSING REMARKS

In conclusion, we would like to express our sincere gratitude to each of you for your commitment to Princeton NextG. Together, we have built a strong foundation, and we look forward to seeing what we will accomplish in the years ahead. Thank you once again for your dedication, and we look forward to our continued collaboration.

Warm regards,

*Yasaman Ghasempour*



*Andrea Goldsmith*



*Kaushik Sengupta*

