VOL. 5 ISSUE 1 · SPRING/SUMMER 2025

# CINSER BRIEF

Newsletter of the Center for Information & Security Education and Research (CINSER) at Chicago State University

## CINSER Updates

Spring and summer 2025 have been busy months at CINSER! There has been significant progress in updating and improving the new space for the Center. New flooring was installed in the main conference room area in the CINSER offices and an associated networking lab space in ED 202 received an electrical update and technology upgrades. CINSER is ever grateful for the support from CSU to improve its physical space in support of its work.

Mic2ExL cohort 2, which began in March, completed phase 1 - hands on training in June. The cohort presented many excellent projects demonstrating their skill in microelectronics design. CINSER also established partnership with two organizations, OASiS and the JPI Group, to bring new opportunities in semiconductors and microelectronics to project stakeholders (see page 2).

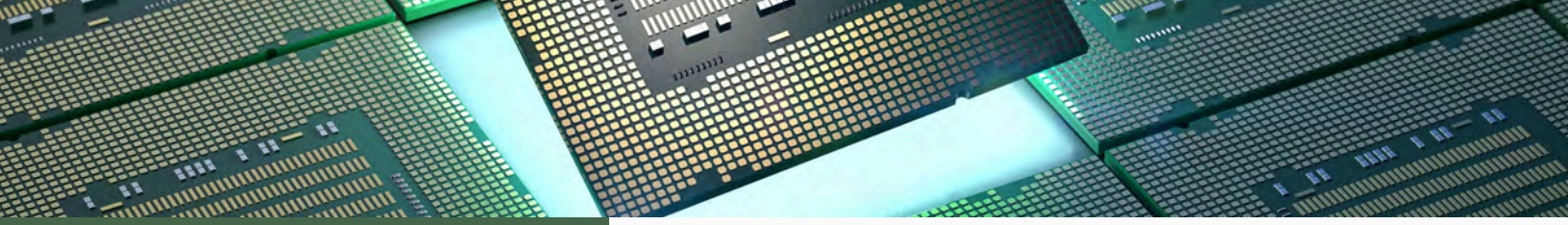
The IC2Tech Consortium held its first colloquium (formerly the CINSER Colloquium) on April 17, 2025 (see page 3). This one-day online event included two keynote talks and an exciting panel discussion. The IC2Tech Consortium also held a half-day, online faculty development workshop, "Intelligence and the U.S. Intelligence Community" presented by Advisory Board member, Professor Mark Roth on July 10, 2025.

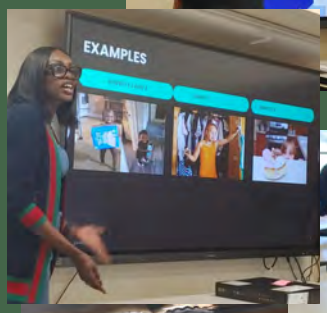
The NSF-funded project, AI@PBI, has launched the CSU Artificial Intelligence Initiative (AII@CSU) and is currently recruiting members for its faculty working group (see page 4).

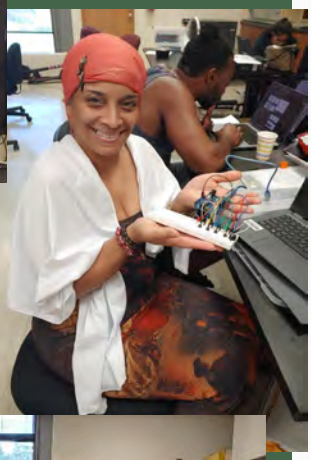
CINSER participated in the Illinois Semiconductor Workforce Network (ISWN) Summer Workshop on July 28, 2025 where it met with local leaders in semiconductors from industry, academia and the national laboratories. CINSER is also awarding ISWN fellowship stipends to students enrolled in CSU's new semiconductor certificate program (see page 7).

Dr. Ayyash presented at the Cybersecurity Across Disciplines (CyAD) Summit in June and at the CARNATIONS Days 2025 conference in July. Dr. Black presented a poster at the ASEE Annual Conference in June.

## This issue:



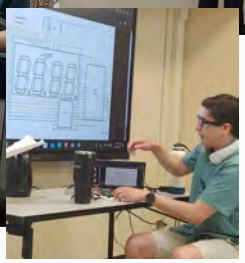

# Mic2ExL Cohort 2 Finishes Phase 1

The Chicagoland Partnership for Semiconductors and Microelectronics Experiential Learning (Mic2ExL) cohort 2 started on March 14, 2025 and completed Phase 1 on June 28, 2025. Mic2ExL is an NSF-funded workforce development program that provides exposure, experience, education and professional development opportunities in the semiconductor industry for working adults in Chicago. Participants presented their final circuit design projects and participated in an awards ceremony on June 28th.

Phase 2 at Argonne National Laboratory will begin on September 2, 2025 where members of the cohort will work on projects with a mentor.

The Mic2ExL partnership has grown by two new members - OASiS and the JPI Group. The Ohio Southwest Alliance on Semiconductors and Integrated Scalable Manufacturing (OASiS) is a collaborative enterprise between the University of Cincinnati and 14 Ohio colleges and universities. With the support of Intel, OASiS was formed in 2022 and has a goal to prepare individuals for entry-level careers in the semiconductor industry. Participants of Mic2ExL will have the opportunity to broaden their knowledge of semiconductors to include fabrication and can earn an OASiS Rapid Certification micro-credential.

The JPI Group, working in conjunction with CareerEquity, will conduct industry employer outreach to promote Mic2ExL participant visibility, will support resume sharing and opportunity alignment across the semiconductor industry, will provide a centralized platform for tracking engagement and will assist with student internship placement and partnerships.

# IC2Tech Spring Colloquium


The Iliana Consortium for Intelligence and Critical Technology (IC2Tech) hosted its first annual spring colloquium online on April 17, 2025. The colloquium theme this year was "Assured Microelectronics: A National Security Necessity." There were two keynote addresses: "Bridging the Gap: Enhancing Hardware Security with Analog Innovations" by Dr. Waleed Khalil, Professor and Director of the Circuit Laboratory for Advanced Sensors and Systems at The Ohio State University, Columbus and "Microelectronics Assurance in an Untrusted Supply Chain: Can AI Help?" by Dr. Swarup Bhunia, Preeminence Professor of Cybersecurity and Semmoto Endowed Chair Professor of Internet of Things (IoT) at the University of Florida. There was a lively panel discussion on the theme, "Critical Issues in Technology and National Security," which was moderated by Kenyatte Simuel, Statewide Lead Chair for Cybersecurity, Ivy Tech Community College. The panelists were Rami Salahieh, Program Chair and Assistant Professor of Cybersecurity, Ivy Tech Community College, Valparaiso; Glenn Hernandez, Captain, U.S. Coast Guard (Ret) and Senior Consultant at OpEdge Solutions, LLC and Dr. Diane M. Janosek, Global Cybersecurity Leader, Attorney and CEO of Janos LLC.

Former CINSER Project Administrator, Ms. Danielle Dewalt, attended the event at CINSER.

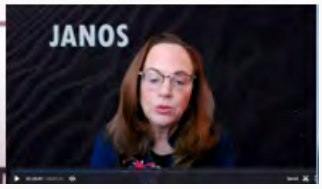
Mrs. Desiree Montgomery and Ms. Danielle Dewalt

Glenn Hernandez

Rami Salahieh

Kenyatte Simuel

Dr. Diane M. Janosek




Dr. Swarup Bhunia



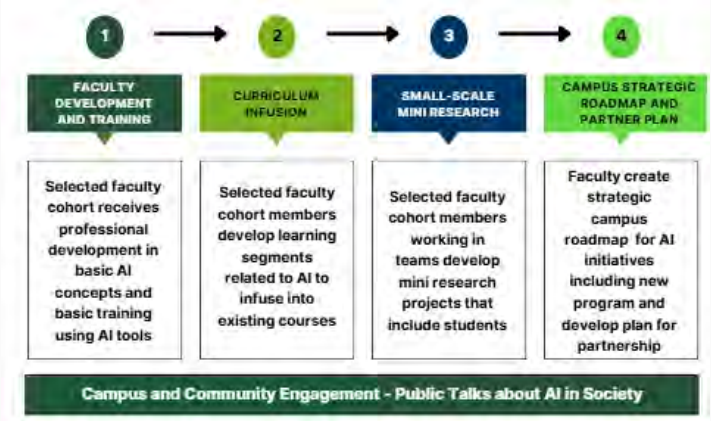

Dr. Waleed Khalil

# Artificial Intelligence Initiative (AII @CSU)

AII@CSU is a campus and community-wide AI literacy initiative to strengthen curricular and co-curricular integration of artificial intelligence throughout all fields of study at CSU as well as to inform and provide a platform for discussion about AI and its integration in society. AII@CSU is funded by a grant from the National Science Foundation. CSU's Center for Teaching & Research Excellence (CTRE) is a partner on this project.

AII@CSU centers around achieving six project goals:

1. AI Awareness - develop AI awareness among CSU faculty from diverse disciplines
2. AI Competence - equip CSU faculty with basic knowledge of AI that can be infused into existing courses
3. AI Curriculum Infusion - establish groundwork and a framework for AI curriculum development in diverse disciplines
4. AI Research - establish groundwork for cross-disciplinary AI research projects
5. AI Partnerships - plan for future partnership with AI Institutes and engage with them for professional development/ professional networking
6. AI Strategic Planning - create a campus-wide strategic roadmap for the integration of AI.




CINSER is recruiting a faculty working group to assist in achieving the goals of the project. Fulltime CSU faculty from across all disciplines are welcome to apply. The deadline to apply is September 15, 2025. For more information please scan the QR code.

"AI has the potential to be more transformative than electricity or fire."

SUNDAR PICHAI
CEO of Google

CENTER FOR TEACHING & RESEARCH EXCELLENCE

NSF

# CARNATIONS

## CARNATIONS

The Center for Assured and Resilient Navigation in Advanced Transportation Systems (CARNATIONS) is a U.S. Department of Transportation Tier-1 University Transportation Center focused on addressing cyber-physical risks to Positioning, Navigation, and Timing (PNT) systems in surface transportation. With the rise in PNT interference such as jamming and spoofing, CARNATIONS aims to develop resilient PNT (R-PNT) technologies and vehicle-to-everything (V2X) communications to ensure safer, more efficient, and cost-effective transportation systems. The Center's research pillars focus on toughening PNT through advanced Global Navigation Satellite System (GNSS) technology, augmenting PNT with non-GNSS sensors and signals, and protecting PNT through interference detection and mitigation. CARNATIONS also emphasizes outreach to underserved communities, evidence-based policymaking, and the development of standards and best practices for responsible PNT use.

CARNATIONS integrates research, education, and technology transfer to achieve its goals. It offers specialized training programs to prepare future transportation professionals, with a focus on underrepresented groups, and facilitates hands-on research through its Engineering Research Toolkit.

Dr. Ayyash, co-PI of CARNATIONS, presented a talk, "R-PNT Using Edge AI Solutions" on July 29, 2025 at the CARNATIONS Days 2025 conference which was hosted by Virginia Tech in Blacksburg, VA.

Learn more about CARNATIONS

"There can be no doubt that the transportation sector is the most critical sector of our economy."

ROBERT BRADY

# ISWN

The Illinois Semiconductor Workforce Network (ISWN) is a collaboration of Illinois colleges and universities (University of Illinois Urbana-Champaign, University of Illinois Chicago, Parkland Community College, Harper College, Chicago State University, Illinois Institute of Technology, City Colleges of Chicago, Heartland Community College, and Illinois Eastern Community Colleges), the semiconductor industry, national laboratories (Argonne National Laboratory and Fermilab National Accelerator Laboratory), the Discovery Partners Institute, the Illinois Innovation Network, the Illinois Community College Board, and the state government (IL DCEO). ISWN has an aim "to drive inclusive and integrated semiconductor programs, innovation, and economic development across IL and beyond." Industry members of the network provide advice and oversight while also benefiting from access to a pool of trained workers. ISWN is led by PI, Dr. Shaloo Rakheja, ISWN Director at UIUC and Dr. Igor Paprotny, UIC Lead. Dr. Moussa Ayyash leads the CSU team.

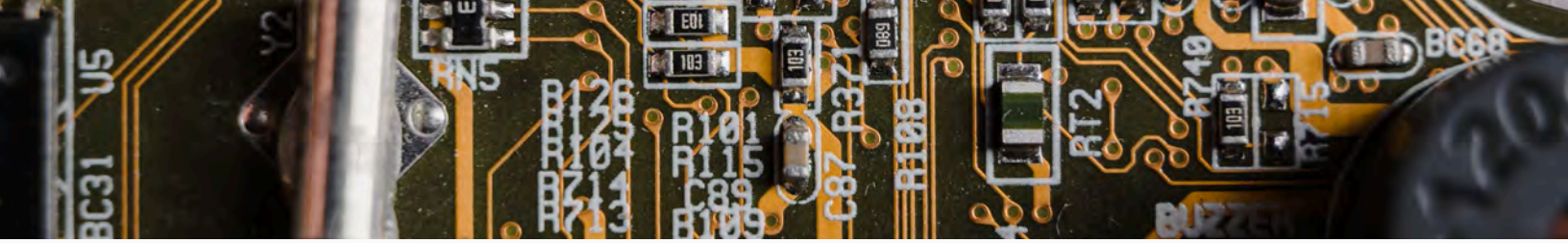
ISWN held its Summer Workshop on July 28, 2025 at the University of Illinois at Chicago. Alexandra (Lexie) Waugh, Director of Grants and Recognition Programs for the National Semiconductor Technology Center (NSTC) Workforce Center of Excellence presented on its Workforce Center of Excellence's vision, strategy, and goals. The keynote address was made by Kristi Dula, Deputy Director & Illinois Office of Entrepreneurship, Innovation, & Technology Lead, Illinois Department of Commerce & Economic Opportunity. There were two panels; one was focused on industry relations and the other was focused on institutional partnerships. There was also a poster fair where ISWN students participating in the Semiconductor Fabrication Training Program presented their work.

CINSER held an on-campus information session about CSU's Semiconductors Fellowship on June 21, 2025. Fellowship stipends are available to undergraduate students majoring in a field related to semiconductors and who are enrolled and taking courses in the Semiconductor Technology and Manufacturing certificate program. For more information or to apply, please send an email message to cinser@csu.edu (see page 7).

Natcast

"“The way we look at manufacturing is this: the U.S.' strategy should be to skate where the puck is going, not where it is."

TIM COOK
CEO of Apple Inc.



# Opportunities

CINSER is pleased to announce two opportunities - Mic2ExL Cohort 3 and an ISWN Fellowship.

The Chicagoland Partnership for Semiconductors and Microelectronics Experiential Learning (Mic2ExL) is recruiting for participants in its 3rd cohort. This opportunity is open to the public at large.

The Illinois Semiconductor Workforce Network (ISWN) is offering fellowship stipends to CSU students enrolled in the Semiconductor Technology Manufacturing certificate program.



More information about Mic2ExL Cohort 3 at CINSER

More information about ISWN Fellowship at CINSER

# Announcements and Events

## PUBLICATIONS & PRESENTATIONS

L. U. Khan, M. Guizani, S. Muhaidat and M. Ayyash, "QoS-Enabled Wireless Split Federated Learning: A Reinforcement Learning and Optimization Approach," in IEEE Transactions on Consumer Electronics, doi: 10.1109/TCE.2025.3587176.

Ayyash, M. (2025, June 24) Toward and an Assured & Resilient Navigation in Advanced Transportation Systems. Presentation at Cybersecurity Across Disciplines (CyAD) Summit, Moraine Valley Community College, Palos Hills, IL.

Black, K., & Ayyash, M. (2025, June 22-25). ITE Innovation and Technology Ecosystems: The Adult Learning Ecosystem in a Semiconductor Workforce Development Program. Poster presented at the American Society of Engineering Education (ASEE) Annual Conference, Montreal, QC. https://nemo.asee.org/public/conferences/365/papers/48874/view.

## UPCOMING EVENTS - WEBINARS

CINSER Fall 2025 Webinar

Dr. Shaloo Rakheja (Talk Title & Registration info TBA)
University of Illinois, Urbana-Champaign
Nov. 5, 2025, 11:00 AM CST

CARNATIONS

CARNATIONS is hosting two fall 2025 online webinars. To register to attend a webinar, please scan the QR code:

The Evolution of Advanced Air Mobility, A New Dimension of Mobility
Dr. Kamesh Namuduri
University of North Texas, Denton, TX
Sept. 3, 2025, 11:00 AM CST

Aerial and RIS-assisted Edge Computing for Intelligent Transportation Services
Dr. Wael Jaafar
University of Quebec, Montreal, Canada
Oct. 1, 2025, 11:00 AM CST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ED 208


The Center for Information & Security Education and Research (CINSER) is an interdisciplinary center at Chicago State University with activities in the areas of academics, outreach and research. CINSER focuses on emerging and critical technologies such as cybersecurity, semiconductors and microelectronics, autonomous systems, and artificial intelligence. CINSER has active status as an Intelligence Community Center for Academic Excellence (IC CAE).

## CINSER STAFF

Dr. Moussa Ayyash, CINSER Director
Dr. Kimberly Black, CINSER Associate Director
Mrs. Desiree Montgomery, Senior Project Administrator
Ms. Sewar Dghaim, Mic2ExL Project Coordinator

## CARNATIONS Research Associates

Dr. Anad Singh

CHICAGO STATE UNIVERSITY