Soheil Salehi

✉ ssalehi[at]arizona.edu • **U.S. Permanent Resident**

I. Education

Ph.D., Computer Engineering **2014-2020**

ECE Department, University of Central Florida, Orlando, FL *Advisor: Professor Ronald F. DeMara*

Dissertation: Energy-Efficient Signal Conversion and In-Memory Computing using Emerging Spin-based Devices

M.S., Computer Engineering **2014-2016**

ECE Department, University of Central Florida, Orlando, FL *Advisor: Professor Ronald F. DeMara*

Thesis: Towards Energy-Efficient and Reliable Computing: From Highly-Scaled CMOS Devices to Resistive Memories

B.S., Computer Engineering **2009-2014**

ECE Department, Isfahan University of Technology, Iran, *(Visiting Student, University of Tehran, 2011-2014)*

Project: Design and implementation of Embedded Systems for Autonomous Vehicles using Wireless Sensor Networks

II. Employment

Tenure-Track Assistant Professor **2022-Present**

Electrical and Computer Engineering Department, The University of Arizona, Tuscon, AZ

Systems and Industrial Engineering Department

Fellow of the Center for Semiconductor Manufacturing (CSM)

Director of Privacy-Preserving, Intelligent, and Secure Computing (PRISM) Lab

NSF Computing Innovation Fellow (CIFellow) **2020-2022**

ECE Department, University of California Davis, Davis, CA

Associate Member, UC Davis Institute for Hardware and AI-enabled Cyber Security (IHACS)

Member of Accelerated, Secure, and Energy-Efficient Computing (ASEEC) Lab

III. Professional Experience

A. Research Experience

Privacy-preserving, Intelligent, and Secure Computing (PRISM) Lab **2022-Present**

Assistant Professor *ECE, The University of Arizona*

Institute for Hardware and AI-enabled Cyber Security (IHACS) **2021-2022**

Associate Member *ECE, University of California Davis*

Accelerated, Secure, and Energy-Efficient Computing (ASEEC) Lab **2020-2022**

NSF-Sponsored CIFellow, Postdoctoral Research Fellow *ECE, University of California Davis*

Computer Architecture Lab (CAL) **2014-2020**

Research Assistant *ECE, University of Central Florida*

Advanced Robotics and Intelligent Systems Lab **2013-2014**

Research Assistant *ECE, University of Tehran*

B. Teaching Experience

ECE407/507: Digital VLSI Systems Design **Spring 2024-Spring 2026**

Instructor *ECE, The University of Arizona*

○ Teaching weekly lectures to ~ 30 students per semester; including grading assignments.

○ Designing and preparing project assignments, grading projects, and tutoring students via post-test remediation sessions.

○ Configuring and operating Synopsys and Cadence circuit simulation, modeling, and analysis

○ Using Large Language Models (LLMs) to design VLSI circuits and systems (e.g. RISC-V Processor), and identify vulnerabilities and mitigate them by utilizing CVE and CWE databases.

ECE413/513: Web Development and the Internet of Things **Fall 2022-Fall 2025**

Instructor *ECE, The University of Arizona*

- ○ Teaching weekly lectures to $\sim$ 60 students per semester; including grading assignments.
- ○ Designing and preparing project assignments, grading projects, and tutoring students via post-test remediation sessions.
- ○ Configuring and operating HTML, CSS, JavaScript, MongoDB, AWS, VSCode, and Embedded Programming.
- ○ Using Large Language Models (LLMs) to identify vulnerabilities and mitigate them by utilizing CVE and CWE databases.
- ○ Demonstrating a medical Internet of Things system that aims to monitor the heart rate and blood oxygen levels.

EEL3801: Computer Organization and Design   **Fall 2014-Fall 2018**
Lab Instructor   *ECE, University of Central Florida*

- ○ Sole recipient of the **Award for Excellence by a Graduate Teaching Assistant at the university-level**, 2015-2016.

Electronics I   **Spring 2013-Spring 2014**
Teaching Assistant   *ECE, University of Tehran*

Theory of Formal Languages and Automata   **Fall 2013-Spring 2014**
Teaching Assistant   *ECE, University of Tehran*

Microprocessors Interfacing Circuit Design   **Spring 2013, Spring 2014**
Teaching Assistant   *ECE, University of Tehran*

Microprocessors   **Fall 2013**
Teaching Assistant   *ECE, University of Tehran*

Advanced Programming and Laboratory   **Spring 2011**
Lab Instructor   *ECE, Isfahan University of Technology*

IV. Honors and Awards (Total Monetary Amount: $1,123,230))

- ○ [Intel](#) Award to support the research performed by the PRISM Lab, 2026. *Monetary Amount: **$5,000***

- ○ [NXP](#) Gift to support the research performed by the PRISM Lab, 2025. *Monetary Equivalent: **$961,580***

- ○ Anonymous Gift to support the research performed by the PRISM Lab, 2025. *Monetary Amount: **$100,000***

- ○ [NVIDIA](#) Gift to support the research performed by the PRISM Lab, 2025-2026. *Monetary Amount: **$10,000***

- ○ [Turing](#) Gift to support the research performed by the PRISM Lab, 2025. *Monetary Amount: **$25,000***

- ○ [OpenAI](#) Award to support the research performed by the PRISM Lab, 2025. *Monetary Amount: **$2,000***

- ○ Fellow of the Center for Semiconductor Manufacturing (CSM), The University of Arizona, 2025. *Monetary Amount: **$9,000***

- ○ Outstanding Organizing Committee Member Award at the 2025 IEEE International Conference on Computer Design (ICCD), November 2025.

- ○ NSF Travel Support to attend the CISE CAREER workshop in Washington DC, April 2024. *Monetary Amount: **$1,500***

- ○ Outstanding Organizing Committee Member Award at the 2024 IEEE Dallas Circuits and Systems Conference (DCAS), April 2024.

- ○ Outstanding Program Committee Member Award at the 2023 IEEE/ACM Design Automation Conference (DAC), July 2023.

- ○ Best Poster of the Workshop Award Winner at the FUSENANO24 NSF-Sponsored Workshop, The University of Arizona, February 2024. *Monetary Amount: **$300***

- ○ University Award for Excellence by a Graduate Teaching Assistant, University of Central Florida, Spring 2016. *Monetary Amount: **$1,000***

- ○ Award for Excellence by a Graduate Teaching Assistant at the College of Engineering and Computer Science, University of Central Florida, Spring 2016. *Monetary Amount: **$500***

- ○ Award for Excellence by a Graduate Teaching Assistant at the Department of Electrical and Computer Engineering, University of Central Florida, Spring 2016.

○ Best Presentation of the Symposium Award Winner at the University of California Davis Postdoctoral Research Symposium 2021, March 31, 2021. *Monetary Amount: $250*

○ Best Poster of the Conference Award Winner at the ACM Great Lake Symposium on VLSI (GLSVLSI), May 9-11, 2019.

○ Best Student Poster and Second Best Poster Presentation at the Digitally-Mediated Team Learning (DMTL) National Science Foundation (NSF)-Sponsored Workshop, March 31, 2019. *Monetary Amount: $100*

○ Best Paper of the Session and Best Paper of The Conference Award Nominee at the IEEE International Symposium on Quality Electronic Design (ISQED), March 13-15, 2017.

○ Frank Hubbard Engineering Endowed Scholarship for the 2019-2020 academic year. *Monetary Amount: $1,000*

○ David T. and Jane M. Donaldson Memorial Graduate Scholarship for the 2018-2019 academic year. *Monetary Amount: $5,000*

○ Daniel D. Hammond Engineering Graduate Scholarship for the 2017-2018 academic year. *Monetary Amount: $1,000*

○ Nominated for the "30-Under-30" Award at the University of Central Florida, Fall 2019.

○ Nominated for the Postdoctoral Research Excellence Award at the University of California Davis, Spring 2022

V. Service Activities

A. College and Department Committees, Professional Memberships, and Other Activities....

○ *Member of Hardware CWE Special Interest Group (HW CWE SIG)*, MITRE, 2022-Present.

○ *Member of CWE Most Important Hardware Weaknesses Group (MIHW)*, MITRE, 2025.

○ *Fellowship Selection Judge*, College of Engineering, The University of Arizona, 2023-2026.

○ Member of *Faculty Hiring Committee*, Computer Science and Engineering, Electrical and Computer Engineering Department, The University of Arizona, 2023-2025.

○ Member of *Faculty Hiring Committee*, Software Engineering, Systems and Industrial Engineering Department, The University of Arizona, 2024-2025.

○ Member of *Executive Committee*, Electrical and Computer Engineering Department, The University of Arizona, 2024-2025.

○ Member of *Colloquium ECE 695*, Electrical and Computer Engineering Department, The University of Arizona, 2024-2025.

○ Member of *Committee on Committees*, Electrical and Computer Engineering Department, The University of Arizona, 2023-2026.

○ Member of *Instructional Equipment & Software Planning Committee*, Electrical and Computer Engineering Department, The University of Arizona, 2023-2025.

○ Member of *Graduate Recruiting and Awards Committee*, Electrical and Computer Engineering Department, The University of Arizona, 2023-2024.

○ Member of *Software Engineering Program Proposal Development Committee*, Electrical and Computer Engineering Department, The University of Arizona, 2022-2023.

○ Member of *Graduate Studies Committee*, Software Engineering Program, Systems and Industrial Engineering Department, The University of Arizona, 2023-2025.

○ Proposal Reviewer and Panelist for *National Science Foundation*, 2024.

○ Proposal Reviewer and Panelist for *U.S. Army*, 2024.

○ *Association of Computing Machinery (ACM)*, Member since 2023.

○ *Institute of Electrical and Electronics Engineers (IEEE)*, Student Member 2015-2020, Member 2020-2025, Senior Member since 2025.

○ *American Society of Engineering Education (ASEE)*, Member since 2018.

○ Invited to serve as the Graduate Student at Large to the *Activity and Service Fee (A&SF) Budget Committee*, University of Central Florida, Fall 2016.

○ Founding President of *Student Laureates of STEM Teaching and Learning (SLSTL)* Registered Student Organization, University of Central Florida, Summer 2016-Spring 2020.

○ Founding President of *Computer Hardware Innovation and Design Association (CHIDA)* Registered Student Organization, University of Central Florida, Spring 2019-Spring 2020.

○ Invited to serve as the Student Representative to the *Teaching Incentive Program (TIP) Faculty Award Committee*, College of Engineering and Computer Science, University of Central Florida, Spring 2016.

○ Elected to be the Chairman of *Conference Registration and Travel (CRT) Committee* at the Student Government Association Senate, University of Central Florida, Spring 2016-Fall 2016.

○ Elected to be a Member of *Conference Registration and Travel (CRT) Committee* at the Student Government Association Senate, University of Central Florida, Fall 2015-Fall 2016.

○ Elected as a Senator at *Student Government Association (SGA) Senate*, University of Central Florida, Fall 2015-Fall 2016.

○ Conference Volunteer for *IEEE International Symposium Series on Computational Intelligence (ISSCI)*, Orlando, FL, Fall 2014.

B. Outreach Activities

○ Founded the *Artificial Intelligence Hardware Design Cup (AI-HDC)*, a competition to introduce PCB design and Robotics to learners at the high school level in partnership with the Summer Engineering Academy (SEA) at the University of Arizona as well as Chips and Wafers Summer Camp in partnership with the Chandler Unified School District, Summer 2025.

○ Founded the *Artificial Intelligence Hardware Design League (AI-HDL)*, an international competition to introduce semiconductor chip design to learners at all levels of high school, community college, undergraduate, and graduate studies, Fall 2024-Spring 2025.

○ Mentored an undergraduate student researcher as part of the *REAL Work: Research, Engineering Advocacy, and Leadership* program to perform research in AI for Semiconductor Design, The University of Arizona, Fall 2024-Spring 2025.

○ Worked with the *Southern Arizona Research, Science, and Engineering Foundation (SARSEF)* and mentored a high school student from Basis High School to perform research in Hardware and IoT Security, The University of Arizona, Fall 2023.

○ Mentored two undergraduate student researchers as part of *NSF Broadening Participation* to perform research in AI for Hardware Security, Summer 2023.

C. Conference and Workshop Organization and Delivery

Organizing Committee (OC):

○ *IEEE International Symposium on Hardware Oriented Security and Trust (HOST)*, Washington, D.C., May 4-7, 2025.

○ *IEEE International Conference on Computer Design (ICCD)*, Dallas, Texas, November 10-12, 2025.

○ *ACM Great Lakes Symposium on VLSI (GLSVLSI)*, Tampa, Florida, June 12-14, 2024.

○ *IEEE Dallas Circuits and Systems Conference (DCAS)*, Dallas, Texas, April 19-21, 2024.

○ *ACM Great Lakes Symposium on VLSI (GLSVLSI)*, Knoxville, Tennessee, June 5-7, 2023.

Technical Program Committee (TPC):

○ *USENIX Security Symposium*, Baltimore, MD, August 12-14, 2026.

○ *Network and Distributed System Security Symposium (NDSS)*, San Diego, California, February 23-27, 2026.

○ *ACM Great Lakes Symposium on VLSI (GLSVLSI)*, New Orleans, Louisiana, June 30 - July 2, 2025.

- *ACM Conference on Computer and Communications Security (CCS)*, Taipei, Taiwan, October 13-17, 2025.
- *Network and Distributed System Security Symposium (NDSS)*, San Diego, California, February 23-28, 2025.
- *Workshop on Top Picks in Hardware and Embedded Security co-located with IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*, San Diego, California, February 23-28, 2025.
- *USENIX Security Symposium*, Philadelphia, Pennsylvania, August 14-16, 2024.
- *IEEE International Symposium on Hardware Oriented Security and Trust (HOST)*, Washington, D.C., May 6-9, 2024.
- *IEEE International Symposium on Quality Electronic Design (ISQED)*, San Francisco, California, April 3-5, 2024.
- *IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*, San Francisco, California, October 29-November 2, 2023.
- *Workshop on Attacks and Solutions in Hardware Security (ASHES)* co-located with *ACM Conference on Computer and Communications Security (CCS)*, Copenhagen, Denmark, November 26-30, 2023.
- *Safety and Security in Heterogeneous Open SoC Platforms (SSH-SoC) Workshop* co-located with *IEEE/ACM Design Automation Conference (DAC)*, San Francisco, California, July 9-13, 2023.
- *ACM Great Lakes Symposium on VLSI (GLSVLSI)*, Knoxville, Tennessee, June 5-7, 2023.
- *IEEE/ACM Design Automation Conference (DAC)*, San Francisco, California, July 9-13, 2023.
- *IEEE International Symposium on Quality Electronic Design (ISQED)*, San Francisco, California, April 5-7, 2023.
- *IEEE International Conference on VLSI Design (VLSID)*, Hyderabad, India, January 8-12, 2023.

Chair of Session:

- *IEEE/ACM Design Automation Conference (DAC)*, San Francisco, California, June 23-27, 2024.
- *FUSENANO24 Workshop Poster Session* at the University of Arizona, Tucson, Arizona, February 19-20, 2024.
- *IEEE International Conference on Computer Design (ICCD)*, Washington, D.C., November 6-8, 2023.
- *ACM Great Lakes Symposium on VLSI (GLSVLSI)*, Knoxville, Tennessee, June 5-7, 2023.
- *IEEE International Symposium on Quality Electronic Design (ISQED)*, San Francisco, California, April 5-7, 2023.

Organizer, Creator, and Chair of Session:

- "Edge AI and Applications" Special Session at *IEEE International Symposium on Quality Electronic Design (ISQED)*, San Francisco, California, April 8-10, 2026.
- "LLM Assisted Security and Trust Exploration (LAST-X)" Workshop at *Network and Distributed Systems Security (NDSS) Symposium*, San Diego, California, February 23–27, 2026.
- "From Atom to Chip: Navigating the Semiconductor Landscape Across STEM Disciplines" Workshop at *American Association for the Advancement of Science (AAAS)*, Phoenix, Arizona, February 12-14, 2026.
- "LLMs for Hardware Design Challenge" Student Competition at *International Conference on Computer Design (ICCD)*, Dallas, Texas, November 10–12, 2025.
- "Generative AI in Electronic Design Automation (EDA): Revolution or Risk?" Panel at *IEEE/ACM Design Automation Conference (DAC)*, San Francisco, California, June 22-25, 2025.
- "Circuits and Systems for AI and ML: Security Threats and Challenges" Special Session at *IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, Phoenix, Arizona, August 6-9, 2023.
- "Machine Learning and Reconfigurability: Towards Sustainable Security" Special Session at *ACM Great Lakes Symposium on VLSI (GLSVLSI)*, Knoxville, Tennessee, June 5-7, 2023.
- "ML-Assisted Hardware Trojan Detection" Education Class at *IEEE/ACM Embedded Systems Week (ESWEEK)*, Virtual, October 7-14, 2022.

D. Technical Paper Reviewer/Referee

Journals

- *ACM Transactions on Design Automation of Electronic Systems (TODAES)*, 2024 and 2025.
- *IEEE Transactions on Electron Devices (TED)*, 2023, 2024, and 2025.

- *IEEE Access*, 2025.
- *Journal of Surveillance, Security, and Safety (JSSS)*, 2024.
- *ACM Transactions on Computer Systems (TCS)*, 2023.
- *IEEE Transactions on Very Large Integrated Systems (TVLSI)*, 2018, 2019, 2021, 2023.
- *IEEE Transactions on Computer-Aided Design (TCAD)*, 2019, 2021, 2022, and 2023.
- *IEEE Transactions on Computers (TC)*, 2015, 2018, 2022, and 2023.
- *ACM Transactions on Computing Systems (TOCS)*, 2023.
- *IEEE Journal of Emerging and Selected Topics in Circuits and Systems (JETCAS)*, 2023.
- *Neural Processing Letters*, 2022.
- *IEEE Transactions on Circuits and Systems II: Express Briefs (TCAS-II)*, 2016, 2020, and 2021.
- *IEEE Journal of Solid-State Circuits (JSSC)*, 2021.
- *IEEE Transactions on Circuits and Systems I (TCAS-I)*, 2021.
- *IEEE Transactions on Nanotechnology (TNANO)*, 2020.
- *ACM Journal of Emerging Technologies in Computing Systems (JETC)*, 2020.
- *IEEE Access*, 2018 and 2020.
- *IEEE Open Journal of Circuits and Systems (OJCAS)*, 2020.
- *IEEE Transactions on Emerging Topics in Computing (TETC)*, 2019.
- *International Journal of Electrical Engineering Education (IJEEE)*, 2018.

Conferences

- *ACM Conference on Computer and Communications Security (CCS)*, 2025.
- *Network and Distributed Systems Security Symposium (NDSS)*, 2025, and 2026.
- *USENIX Security Symposium*, 2024, 2025, and 2026.
- *IEEE International Symposium on Quality Electronic Design (ISQED)*, 2022, 2023, and 2024.
- *ACM Great Lake Symposium on VLSI (GLSVLSI)*, 2020, 2021, 2022, 2023, and 2025.
- *IEEE/ACM Design Automation Conference (DAC)*, 2021, 2022, and 2023.
- *IEEE International Symposium on Hardware Oriented Security and Trust (HOST)*, 2024.
- *IEEE/ACM International Conference On Computer-Aided Design (ICCAD)*, 2020, 2021, and 2023.
- *IEEE International Conference on VLSI Design (VLSID)*, 2022.
- *American Society of Engineering Education (ASEE)*, 2016, 2017, 2018, and 2019.
- *IEEE Frontiers In Education (FIE)*, 2019.
- *IEEE Computer Society Annual International Symposium on VLSI (ISVLSI)*, 2015, 2016, 2017, and 2018.
- *IEEE SoutheastCon*, 2018.

VI. Publications (Peer-Reviewed Published: 73 (Journal: 17, Conference: 56))

A. Journal Publications ....

i. Technical Manuscripts:

15. Y.-Z. Lin, Q. Shi, Z. Yang, B. Saber Latibari, S. Satam, **S. Salehi**, and P. Satam, "DDD-GenDT: Dynamic Data-driven Generative Digital Twin Framework," in *IEEE Transactions on Artificial Intelligence*, September 2025. **(IF: 5.23)**

14. A. Yousseef, Y.-Z. Lin, S. Satam, B. Saber Latibari, J. Pacheco, **S. Salehi**, S. Hariri, and P. Satam, "Autonomous Vehicle Security: Hybrid Threat Modeling Approach," in *IEEE Open Journal of Vehicular Technology*, June 2025. **(IF: 6.4)**

13. A. Asmita, R. Tsang, S. Ghimire, **S. Salehi**, and H. Homayoun, "Bare-Metal Firmware Fuzzing: A Survey of

Techniques and Approaches," *IEEE Access*, June 2025. **(IF: 3.4)**

12. S. Ghimire, Y. Lin, M. Mamun, M. A. Chowdhury, F. Alemi, S. Cai, J. Guo, M. Zhu, H. Li, B. Saber Latibari, S. Rafatirad, P. Satam, and **S. Salehi**, "HWREx: AI-enabled Hardware Weakness and Risk Exploration and Story-telling Framework with LLM-assisted Mitigation Suggestion," *ACM Transactions on Design Automation of Electronic Systems (TODAES)*, May 2025. **(IF: 2.2)**
    Special Issue: Large Language Models for Electronic System Design Automation

11. B. Saber Latibari, N. Nazari, M. A. Chowdhury, K. I. Gubbi, C. Fang, S. Ghimire, E. Hosseini, H. Sayadi, H. Homayoun, **S. Salehi**, and A. Sasan, "Transformers: A Security Perspective," IEEE Access, 2024. **(IF: 3.4)**

10. M. A. Chowdhury, M. Hossain, C. Mastrangelo, R. F. DeMara, and **S. Salehi**, "S-Tune: SOT-MTJ Manufacturing Parameters Tuning for Securing the Next Generation of Computing," *Frontiers in Electronics*, 2024. **(IF: 1.9)**

9. K. I. Gubbi, B. Saber Latibari, M. A. Chowdhury, A. Jalilzadeh, E. Yazdandoost Hamedani, S. Rafatirad, A. Sasan, H. Homayoun, and **S. Salehi**, "Optimized and Automated Secure IC Design Flow: A Defense-in-Depth Approach," *IEEE Transactions on Circuits and Systems I: Regular Papers (TCAS-I)*, 2024. **(IF: 5.1)**
   Special Issue on "Learning, Optimization, and Implementation for Circuits and Systems Driven by Artificial Intelligence"

8. K. I. Gubbi, B. Saber Latibari, A. Srikanth, T. Sheaves, S. A. Beheshti-Shirazi, S. Manoj P. D., S. Rafatirad, A. Sasan, H. Homayoun, and **S. Salehi**, "Hardware Trojan Detection using Machine Learning: A Tutorial," *ACM Transactions on Embedded Computing Systems (TECS)*, 2023. **(IF: 2.8)**

7. **S. Salehi**, and R. F. DeMara, "Adaptive Non-Uniform Compressive Sensing using SOT-MRAM Multibit Crossbar Arrays," *IEEE Transactions on Nanotechnology (TNANO)*, vol. 20, pp. 224-228, 2021. **(IF: 2.6)**

6. **S. Salehi**, N. Khoshavi, and R. F. DeMara, "Mitigating Process Variability for Non-Volatile Cache Resilience and Yield," *IEEE Transactions on Emerging Topics in Computing (TETC)*, vol. 8, no. 3, pp. 724-737, July-September, 2020. **(IF: 7.7)**
   Special Issue on "Reliability-aware Design and Analysis Methods for Digital Systems: from Gate to System Level"

5. **S. Salehi**, N. Khoshavi, R. Zand, and R. F. DeMara, "Self-Organized Sub-bank SHE-MRAM-based LLC: an Energy-Efficient and Variation-Immune Read and Write Architecture," *Integration, The VLSI Journal*, vol. 65, pp. 293-307, 2019. **(IF: 1.2)**

4. **S. Salehi**, and R. F. DeMara, "SLIM-ADC: Spin-based Logic-In-Memory Analog to Digital Converter Leveraging SHE-enabled Domain Wall Motion Devices," *Microelectronics Journal*, vol. 81, pp. 137-143, 2018. **(IF: 1.6)**
   Special Issue on "Spintronic Integrated Circuits and New Architectures for Low Power Electronics"

3. **S. Salehi**, M. Boloursaz Mashhadi, A. Zaeemzadeh, N. Rahnavard, and R. F. DeMara, "Energy-Aware Adaptive Rate and Resolution Sampling of Spectrally Sparse Signals Leveraging VCMA-MTJ Devices," *IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS)*, vol. 8, no. 4, pp. 679-692, 2018. **(IF: 3.9)**
   Special Issue on "Energy-Quality Scalable Circuits and Systems"

2. **S. Salehi**, D. Fan, and R. F. DeMara, "Survey of STT-MRAM Cell Design Strategies: Taxonomy and Sense Amplifier Tradeoffs for Resiliency," *ACM Journal on Emerging Technologies in Computing Systems (JETC)*, vol. 13, no. 3, pp. 1-16, 2017. **(IF: 1.4)**

1. R. Zand, A. Roohi, **S. Salehi**, and R. F. DeMara, "Scalable Adaptive Spintronic Reconfigurable Logic using Area-Matched MTJ Design," *IEEE Transactions on Circuits and Systems II: Express Briefs (TCAS-II)*, vol. 63, no. 7, pp. 678-682, 2016. **(IF: 3.3)**

ii. STEM Educational Manuscripts:

2. R. F. DeMara, **S. Salehi**, R. Hartshorne, B. Chen, and E. Saqr, "Observable, Traceable, Auto-graded Computer-Mediated Collaborative Learning," *Journal of Interactive Learning Research (JILR)*, vol. 30, no. 3, pp. 397-424, September 2019.

1. B. Chen, R. F. DeMara, **S. Salehi**, and R. Hartshorne, "Elevating Learner Engagement and Outcomes using In-Situ Online Formative Assessment in the Engineering Laboratory: A Viable Alternative to Weekly Lab Reports," *IEEE Transactions on Education*, vol. 61, no. 1, pp. 1-10, February 2018. (**IF: 2.1**)

B. Conference Publications

i. Technical Manuscripts:

43. H. K. Dharavath, M. A. Chowdhury, R. Yasaei, and **S. Salehi**, "LIB-TRAP: Standard Cell Library Hardware Trojan Risk Assessment and Prevention," in *Proceedings of IEEE Microelectronics Design and Test Symposium (MDTS)*, Albany, New York, USA, May 18-20, 2026.

42. S. Ghimire, P. Mirfasihi, M. A. Chowdhury, V. Pugazhenthi, H. K. Dharavath, F. Firouzi, R. Yasaei, P. Satam, and **S. Salehi**, "Can Agents Secure Hardware? Evaluating Agentic LLM-Driven Obfuscation for IP Protection," in *Proceedings of IEEE VLSI Test Symposium (VTS)*, Napa, California, USA, April 27-29, 2026. (**Acceptance Rate: 26%**)

41. V. Pugazhenthi, W.-H. Chu, J. Lu, J. N. Miyahira, M. Eslamimehr, P. Satam, R. Yasaei, and **S. Salehi**, "MOTION: ML-Assisted On-Device Low-Latency Motion Recognition," in *Proceedings of IEEE International Symposium on Quality Electronic Design (ISQED)*, San Francisco, California, USA, April 8-10, 2026. (**Acceptance Rate: 25%**)

40. Z. Yang, Q. Shi, Y.-Z. Lin, **S. Salehi**, P. Satam, and S. Shao, "Edge AI-based Anomaly Behavior Analysis for Industrial Control Systems," in *Proceedings of IEEE International Symposium on Quality Electronic Design (ISQED)*, San Francisco, California, USA, April 8-10, 2026. (**Acceptance Rate: 25%**)

39. M. A. Chowdhury, H. Dharavath, V. Pugazhenthi, and **S. Salehi**, "ARMOR-IMC: Adaptive Resource Mapping for Operational Robustness via Secure In-Memory Computing," in *Proceedings of Government Microcircuit Applications & Critical Technology Conference (GOMACTech)*, New Orleans, Louisiana, USA, March 9-12, 2026.

38. V. Pugazhenthi, M. A. Chowdhury, H. Dharavath, and **S. Salehi**, "Power Side-Channel Attacks and Mitigation for Secure On-Chip Learning in AI Hardware," in *Proceedings of Government Microcircuit Applications & Critical Technology Conference (GOMACTech)*, New Orleans, Louisiana, USA, March 9-12, 2026.

37. Y.-Z. Lin, S. Ghimire, A. Nandimandalam, J. M. Camacho, V. Pugazhenthi, U. Tripathi, R. Macawan, S. Shao, S. Rafatirad, R. Yasaei, P. Satam, and **S. Salehi**, "LLM-HyPZ: Hardware Vulnerability Discovery using an LLM-Assisted Hybrid Platform for Zero-Shot Knowledge Extraction and Refinement," in *Proceedings of IEEE International Conference on Data Mining (ICDM)*, Washington D.C., USA, November 12-15, 2025. (**Acceptance Rate: 20%**)

36. A. Asmita, G. Bandodkar, S. Ghimire, S. Srivastav, **S. Salehi**, and H. Homayoun, "LLM4MCU-Onto: Leveraging LLMs for Automated Ontology Generation from Microcontroller Reference Manual," in *Proceedings of IEEE International Conference on Computer Design (ICCD)*, Dallas, Texas, USA, November 10-12, 2025. (**Acceptance Rate: 28%**)

35. V. Pugazhenthi, M. A. Chowdhury, S. Ghimire, H. K. Dharavath, B. Saber Latibari, and **S. Salehi**, "Power Side-Channel Leakage Assessment of FPGA-Based Spiking Neural Networks," in *Proceedings of IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, Lansing, Michigan, USA, August 10-13, 2025.

34. B. Saber Latibari, N. Nazari, A. Sasan, H. Homayoun, P. Satam, **S. Salehi**, and H. Sayadi, "Transformers for Secure Hardware Systems: Applications, Challenges, and Outlook," in *Proceedings of ACM Great Lake Symposium on VLSI (GLSVLSI)*, New Orleans, Louisiana, USA, June 30 - July 2, 2025. (**Acceptance Rate: 26%**)

33. S. Fehlings, M. A. Chowdhury, B. Saber Latibari, **S. Salehi**, and E. Covi, "Reliability of Capacitive Read in Arrays of Ferroelectric Capacitors," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, London, U.K., May 25-28, 2025.

32. A. Alhamadah, M. Mamun, H. Harms, M. Redondo, Y.-Z. Lin, J. Pacheco, **S. Salehi**, and P. Satam, "Photogrammetry for Digital Twinning Industry 4.0 (I4) Systems," in *Proceedings of ACS/IEEE International Conference on Computer Systems and Applications (AICCSA)*, Sousse, Tunisia, October 22-26, 2024.

31. R. Tsang, A. Asmita, D. Joseph, **S. Salehi**, P. Mohapatra, and H. Homayoun, "FFXE: Dynamic Control Flow Graph Recovery for Embedded Firmware Binaries," in *Proceedings of USENIX Security Symposium*, Philadelphia, Pennsylvania, USA, August 14-16, 2024. **(Acceptance Rate: 18%)**

30. B. Saber Latibari, **S. Salehi**, H. Homayoun, and A. Sasan, "IRET: Incremental Resolution Enhancing Transformer," in *Proceedings of ACM Great Lake Symposium on VLSI (GLSVLSI)*, Tampa, Florida, USA, June 12-14, 2024. **(Acceptance Rate: 26%)**

29. N. Nazari, K. I. Gubbi, B. Saber Latibari, M. A. Chowdhury, C. Fang, A. Sasan, S. Rafatirad, H. Homayoun, and **S. Salehi**, "Securing On-Chip Learning: Navigating Vulnerabilities and Potential Safeguards in Spiking Neural Network Architectures," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, Singapore, May 19-22, 2024.

28. B. Saber Latibari, S. Ghimire, M. A. Chowdhury, N. Nazari, K. I. Gubbi, A. Sasan, H. Homayoun, and **S. Salehi**, "Automated Hardware Logic Obfuscation Framework Using GPT," in *Proceedings of IEEE Dallas Circuits and Systems Conference (DCAS)*, Dallas, Texas, USA, April 19-21, 2024. **(Acceptance Rate: 20%)**

27. M. Hossain, M. A. Chowdhury, R. F. DeMara, and **S. Salehi**, "Sensitivity Analysis of SOT-MTJs to Manufacturing Process Variation: A Hardware Security Perspective," in *Proceedings of IEEE International Symposium on Quality Electronics Design (ISQED)*, San Francisco, California, USA, April 3-5, 2024. **(Acceptance Rate: 25%)**

26. M. Wali Ur Rahman, M. Mehrab Abrar, H. G. Copening, S. Hariri, S. Shao, P. Satam, **S. Salehi**, "Quantized Transformer Language Model Implementations on Edge Devices," in *Proceedings of IEEE International Conference on Machine Learning and Applications (ICMLA)*, Jacksonville, Florida, USA, December 15-17, 2023.

25. S. Kulkarni, R. Tsang, A. Asmita, H. Homayoun, and **S. Salehi**, "Leveraging Firmware Reverse Engineering for Stealthy Sensor Attacks via Binary Modification," in *Proceedings of IEEE International Conference on Computer Design (ICCD)*, Washington, D.C., USA, November 6-8, 2023. **(Acceptance Rate: 28%)**

24. K. I. Gubbi, I. Kaur, A. Hashem, S. Manoj P. D., H. Homayoun, A. Sasan, and **S. Salehi**, "Securing AI Hardware: Challenges in Detecting and Mitigating Hardware Trojans in ML Accelerators," in *Proceedings of IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, Phoenix, Arizona, USA, August 6-9, 2023.

23. M. M. Lopez, S. Shao, S. Hariri, and **S. Salehi**, "Machine Learning for Intrusion Detection: Stream Classification Guided by Clustering for Sustainable Security in IoT," in *Proceedings of ACM Great Lake Symposium on VLSI (GLSVLSI)*, Knoxville, Tennessee, USA, June 5-7, 2023. **(Acceptance Rate: 26%)**

22. M. Hossain, A. Tatulian, H. Reddy Thummala, R. F. DeMara, and **S. Salehi**, "Energy-/Area-Efficient Spintronic ANN-based Digit Recognition via Progressive Modular Redundancy," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, Monetary, California, USA, May 21-25, 2023.

21. R. Hassan, C. Bandi, M. Tsai, S. Golchin, S. Manoj P. D., S. Rafatirad, and **S. Salehi**, "Automated Supervised Topic Modeling Framework for Hardware Weaknesses," in *Proceedings of IEEE International Symposium on Quality Electronic Design (ISQED)*, San Francisco, California, USA, April 5-7, 2023. **(Acceptance Rate: 25%)**

20. G. Kolhe, T. Sheaves, K. I. Gubbi, **S. Salehi**, S. Manoj P. D., S. Rafatirad, A. Sasan, and H. Homayoun, "LOCK & ROLL: Deep-Learning Power Side-Channel Attack Mitigation using Emerging Reconfigurable Devices and Logic Locking," in *Proceedings of ACM Design Automation Conference (DAC'22)*, San Francisco, California, USA, July 10-14, 2022. **(Acceptance Rate: 22%)**

19. **S. Salehi**, T. Sheaves, K. I. Gubbi, S. A. Beheshti-Shirazi, S. Manoj P. D., S. Rafatirad, A. Sasan, T. Mohsenin, and H. Homayoun, "Neuromorphic-Enabled Security for IoT," in *Proceedings of IEEE International New Circuits and Systems Conference (NEWCAS'22)*, Quebec, Canada, June 19-22, 2022.

18. K. I. Gubbi, T. Sheaves, **S. Salehi**, S. Manoj P. D., S. Rafatirad, A. Sasan, and H. Homayoun, "Survey of Machine Learning for Electronic Design Automation," in *Proceedings of ACM Great Lake Symposium on VLSI (GLSVLSI'22)*, Orange County, California, USA, June 6-8, 2022. **(Acceptance Rate: 26%)**

17. R. Tsang, D. Joseph, A. Asmita, **S. Salehi**, N. Carreon, P. Mohapatra, and H. Homayoun, "FANDEMIC: Firmware Attack Construction and Deployment on Power Management Integrated Circuit and Impacts on IoT Applications,"

in *Proceedings of Network and Distributed System Security Symposium (NDSS)*, San Diego, California, USA, February 27-March 3, 2022. **(Acceptance Rate: 16%)**

16. G. Kolhe, **S. Salehi**, T. Sheaves, S. Manoj P. D., S. Rafatirad, A. Sasan, and H. Homayoun, "Securing Hardware via Dynamic Obfuscation Utilizing Reconfigurable Interconnect and Logic Blocks," in *Proceedings of IEEE/ACM Design Automation Conference (DAC'21)*, San Francisco, California, USA, December 5-9, 2021. **(Acceptance Rate: 21%)**

15. M. Hossain, **S. Salehi**, D. Mulvaney, and R. F. DeMara, "Embedded STT-MRAM Energy Analysis for Intermittent Applications Using Mean Standby Duration," in *Proceedings of IEEE International Conference on Electronics, Circuits and Systems (ICECS'21)*, Dubai, UAE, November 28-December 1, 2021.

14. H. Wang, **S. Salehi**, H. Sayadi, A. Sasan, T. Mohsenin, S. Manoj P. D., S. Rafatirad, and H. Homayoun, "Evaluation of Machine Learning-based Detection against Side-Channel Attacks on Autonomous Vehicle," in *Proceedings of IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS'21)*, Virtual, June 6-9, 2021.

13. C. Bandi, **S. Salehi**, R. Hassan, S. Manoj P. D., H. Homayoun, and S. Rafatirad, "Ontology-Driven Framework for Trend Analysis of Vulnerabilities and Impacts in IoT Hardware," in *Proceedings of IEEE International Conference on Semantic Computing (ICSC'21)*, Laguna Hills, California, USA, Virtual, January 27-29, 2021. **(Acceptance Rate: 20%)**

12. A. Tatulian, **S. Salehi**, and R. F. DeMara, "Mixed-Signal Spin/Charge Reconfigurable Array for Energy-Aware Compressive Signal Processing," in *Proceedings of IEEE International Conference on Reconfigurable Computing and FPGAs (ReConfig'19)*, Cancun, Mexico, December 9-11, 2019.

11. G. Camero, **S. Salehi**, and R. F. DeMara, "A Spin-based Analog to Digital Converter Interactive Simulation Framework," in *Proceedings of IEEE International Conference on Reconfigurable Computing and FPGAs (ReConfig'19)*, Cancun, Mexico, December 9-11, 2019.

10. S. Sheikhfaal, S. D. Pyle, **S. Salehi**, and R. F. DeMara, "An Ultra-Low Power Spintronic Stochastic Spiking Neuron with Self-Adaptive Discrete Sampling," in *Proceedings of IEEE International Midwest Symposium on Circuits and Systems (MWSCAS'19)*, Dallas, Texas, USA, August 4-7, 2019. **(Acceptance Rate: 22%)**

9. **S. Salehi**, A. Zaeemzadeh, A. Tatulian, N. Rahnavard, and R. F. DeMara, "MRAM-based Stochastic Oscillators for Adaptive Non-Uniform Sampling of Sparse Signals in IoT Applications," in *Proceedings of IEEE Computer Society Annual Symposium on VLSI (ISVLSI'19)*, Miami, Florida, USA, July 15-17, 2019. **(Acceptance Rate: 17%)**

8. **S. Salehi**, R. Zand, A. Zaeemzadeh, N. Rahnavard, and R. F. DeMara, "AQuRate: MRAM-based Stochastic Oscillator for Adaptive Quantization Rate Sampling of Sparse Signals," in *Proceedings of ACM Great Lake Symposium on VLSI (GLSVLSI'19)*, Tysons Corner, Virginia, USA, May 9-11, 2019.
Best Poster of the Conference Award Winner (Acceptance Rate: 26%)

7. **S. Salehi**, R. Zand, and R. F. DeMara, "Clockless Spin-based Look-Up Tables with Wide Read Margin," in *Proceedings of ACM Great Lake Symposium on VLSI (GLSVLSI'19)*, Tysons Corner, Virginia, USA, May 9-11, 2019. **(Acceptance Rate: 26%)**

6. **S. Salehi**, and R. F. DeMara, "BGIM: Bit-Grained Instant-on Memory Cell for Sleep Power Critical Mobile Applications," in *Proceedings of IEEE International Conference on Computer Design (ICCD'18)*, Orlando, Florida, USA, October 7-10, 2018. **(Acceptance Rate: 28%)**

5. **S. Salehi**, and R. F. DeMara, "Process Variation Immune and Energy Aware Sense Amplifiers for Resistive Non-Volatile Memories," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS'17)*, Baltimore, Maryland, USA, May 28-31, 2017.

4. N. Khoshavi, **S. Salehi**, and R. F. DeMara, "Variation-Immune Resistive Non-Volatile Memory using Self-Organized Sub-Bank Circuit Designs," in *Proceedings of IEEE International Symposium on Quality Electronic Design (ISQED'17)*, Santa Clara, California, USA, March 13-15, 2017. **(Acceptance Rate: 25%)**
Best Paper of the Session and Best Paper of The Conference Award Nominee - Top 10%

3. **S. Salehi**, and R. F. DeMara, "Energy and Area Analysis of a Floating-Point Unit in 15nm CMOS Process Technology," in *Proceedings of IEEE SoutheastCon (SECon'15)*, Fort Lauderdale, Florida, USA, April 9-12, 2015.

2. R. A. Ashraf, A. Al-Zahrani, N. Khoshavi, R. Zand, **S. Salehi**, A. Roohi, M. Lin, and R. F. DeMara, "Reactive Rejuvenation of CMOS Logic Paths using Self-Activating Voltage Domains," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS'15)*, Lisbon, Portugal, May 24-27, 2015.

1. P. Soleiman, **S. Salehi**, M. Mahmoudi, M. Ghavami, H. Moradi, and H. Pouretemad, "RoboParrot: A Robotic Platform for Human Robot Interaction, Case of Autistic Children," in *Proceedings of IEEE International Conference on Robotics and Mechatronics (ICRoM'14)*, Tehran, Iran, October 15-17, 2014.

ii. STEM Educational Manuscripts:

13. K. Patel, Y.-Z. Lin, G. Raul, B. P.-J. Shih, M. W. Redondo, B. Sabet Latibari, **S. Salehi**, and P. Satam, "Integrating Generative AI Into Cybersecurity Education: a Study of OCR and Multimodal LLM-Assisted Instruction," in *Proceedings of IEEE Frontiers in Education (FIE'25)*, Nashville, Tennessee, USA, November 2-5, 2025.

12. G. Raul, Y.-Z. Lin, K. Patel, M. W. Redondo, B. Saber Latibari, **S. Salehi**, and P. Satam, "RAG-PRISM: A Personalized, Rapid, and Immersive Skill Mastery Framework with Adaptive Retrieval-Augmented Tutoring," in *Proceedings of IEEE Frontiers in Education (FIE'25)*, Nashville, Tennessee, USA, November 2-5, 2025.

11. Y.-Z. Lin, K. Patel, A. H. Alhamadah, S. Ghimire, M. W. Redondo, D. R. Vidal Corona, J. Pacheco, **S. Salehi**, and P. Satam, "Personalized Education with Generative AI and Digital Twins: VR, RAG, and Zero-Shot Sentiment Analysis for Industry 4.0 Workforce Development," in *Proceedings of American Society of Engineering Education National Annual Conference (ASEE'25)*, Montreal, Canada, June 22-25, 2025.

10. S. Ghimire, M. A. Chowdhury, R. Tsang, R. Yarnell, E. Heckert, J. Carpenter, Y.-Z. Lin, M. Mamun, R. F. DeMara, S. Rafatirad, P. Satam, and **S. Salehi**, "Interactive Framework for Cybersecurity Education and Future Workforce Development," in *Proceedings of IEEE Frontiers in Education Conference (FIE'24)*, Washington, D.C., USA, October 13-16, 2024.

9. R. C. Yarnell, M. Hossain, R. Graterol, A. Pindoria, S. Ghimire, M. A. Chowdhury, **S. Salehi**, Y. Bai, and R. F. DeMara "Educational Tool-spaces for Convolutional Neural Network FPGA Design Space Exploration Using High-Level Synthesis," in *Proceedings of ACM Great Lake Symposium on VLSI (GLSVLSI'24)*, Tampa, Florida, USA, June 12-14, 2024. **(Acceptance Rate: 26%)**

8. P. Satam, C. Philipp, S. Shao, **S. Salehi**, "CPS-TR: An Online Training Platform to Address Fourth Industrial Revolution Workforce Needs," in *Proceedings of IEEE Integrated STEM Education Conference (ISEC'23)*, Laurel, Maryland, USA, March 11, 2023.

7. G. Camero, **S. Salehi**, and R. F. DeMara, "Behavioral Simulation Educational Framework for 2-Terminal MTJ-based Analog to Digital Converter," in *Proceedings of IEEE Integrated STEM Education Conference (ISEC'20)*, Princeton, New Jersey, USA, March 28, 2020.

6. **S. Salehi**, and R. F. DeMara, "Virtualized Active Learning for Undergraduate Engineering Disciplines (VALUED): A Pilot in a Large Enrollment Classroom," in *Proceedings of IEEE Frontiers in Education Conference (FIE'19)*, Cincinnati, Ohio, USA, October 16-19, 2019.

5. **S. Salehi**, R. Zand, and R. F. DeMara, "Learner Capstone Panels for Immersing Undergraduates in Mechanisms of Engineering Research," in *Proceedings of American Society of Engineering Education National Annual Conference (ASEE'19)*, Tampa Bay, Florida, USA, June 15-19, 2019.

4. R. F. DeMara, **S. Salehi**, and N. Khoshavi, S. Pyle, "Scalable Delivery and Remediation of Engineering Assessments using Computer-Based Assessment," in *Proceedings of IEEE Integrated STEM Education Conference (ISEC'19)*, Princeton, New Jersey, USA, March 16, 2019.

3. R. F. DeMara, **S. Salehi**, B. Chen, and R. Hartshorne, "GLASS: Group Learning At Significant Scale via wifi-Enabled Learner Design Teams in an ECE Flipped Classroom," in *Proceedings of American Society of Engineering Education National Annual Conference (ASEE'17)*, Columbus, Ohio, USA, June 25-28, 2017.

2. R. F. DeMara, **S. Salehi**, and S. Muttineni, "Exam Preparation through Directed Video Blogging and Electronically-Mediated Realtime Classroom Interaction," in *Proceedings of American Society of Engineering Education Southeast Section Conference (ASEE-SE'16)*, Tuscaloosa, Alabama, USA, March 13-15, 2016.

1. R. F. DeMara, **S. Salehi**, N. Khoshavi, R. Hartshorne, and B. Chen, "Strengthening STEM Laboratory Assessment Using Student-Narrative Portfolios Interwoven with Online Evaluation," in *Proceedings of American Society of Engineering Education Southeast Section Conference (ASEE-SE'16)*, Tuscaloosa, Alabama, USA, March 13-15, 2016.

C. Books and Book Chapters

2. K. I. Gubbi, B. Saber Latibari, S. Rafatirad, A. Sasan, **S. Salehi**, and H. Homayoun, "Machine Learning Techniques for Detecting Hardware Trojans in ASIC Designs," Book Chapter in *Advances in Hardware Design for Security and Trust,* CRC Press Taylor & Francis Group, Accepted and in press, 2025.

1. Y.-Z. Lin, K. Patel, A. H. J. Alhamadah, B. P.-J.Shih, M. W.Redondo, D. R. V. Corona, B. Saber Latibari, J. Pacheco, **S. Salehi**, and P. Satam, "PRISM: A Personalized, Rapid, and Immersive Skill Mastery Framework for Personalizing Experiential Learning Through Generative AI," Book Chapter in *Generative AI in Higher Education Assessment – Theory, Practice, and Ethical Implications,* Springer, Accepted and in press, 2025.

D. Invention Disclosures and Patents

1. Invention disclosure pertaining to personalization of experiential learning to student's learning needs through the use of generative AI. (Result of the NSF funded SaTC EAGER project.)

E. Media

○ Exhibitor at TechConnect Conference for Presenting a Demo of the NSF-funded gAI-PCT Framework, Washington, D.C., June 2024.

○ Exhibitor at GOMACTech Conference to demonstrate the University of Arizona's Center for Semiconductor Manufacturing (CSM) Initiatives and Capabilities, Charleston, SC, March 2024.

○ Exhibitor at GOMACTech Conference to demonstrate the collaborative hardware security project with the University of California Davis, San Diego, CA, March 2023.

○ Interview with KGUN9 Tucson News, "University of Arizona Holds Competition Integrating AI with Microchips," March 2025, Link to Article.

○ Interview with KGUN9 Tucson News, "U of A engineering students could benefit from Intel's expansion in Arizona," March 2024, Link to Article.

○ News Article Mention by Wired Magazine, "Meet the UK Businesses Shaping the Future," March 2025, Link to Article.

○ News Article by UArizona College of Engineering, "ECE team wins first place in the inaugural AI-Hardware Design League," April 2025, Link to Article.

○ News Article by UArizona Center for Semiconductor Manufacturing (CSM), "High School Students Dive into Semiconductors at "Chips and Wafers" Summer Camp," July 2024, Link to Article.

○ News Article by UArizona Center for Semiconductor Manufacturing (CSM), "CSM Kicks Off AI Hardware Design League for Students to Explore Semiconductor Manufacturing Career Opportunities," December 2024, Link to Article.

○ Recorded Presentation at CIFellows Symposium, May 2025, Link to Video.

○ Recorded Presentation at CIFellows Symposium Co-located with Networking and Information Technology Research and Development (NITRD) Program, May 2022, Link to Video.

○ Blog Post by the Computing Community Consortium, "CIFellow Spotlight – SHIELD: Secure Hardware for IoT using Emerging-devices against side-channeL Deep-learning attacks," February 2022, Link to Article.

F. Presentation in Conferences/Seminars/Symposiums

○ Guest Lecturer at *ECE 425/525: Introduction to Deep Learning*, Tucson, Arizona, November 24, 2025.

○ Invited Panelist at *ACM Great Lakes Symposium on VLSI (GLSVLSI)* to Discuss role of Generative AI in Microelectronics Education, New Orleans, LA, July 1, 2025.

○ Guest Speaker at *AI/CAD for Hardware Security Workshop (AICAD4Sec)* co-located with *IEEE/ACM Design Automation Conference (DAC)*, San Francisco, California, June 22, 2025.

○ Poster presentation at the *CCC Computing Futures Symposium*, Washington, D.C., May 15-16, 2025.

○ Poster presentation at *CRA/CCC CIFellows 2025 Symposium*, Washington, D.C., May 13-14, 2025.

○ Invited Panelist at *Edwards Vacuum's Industry, Government, and Academia Connectivity Panel* to Discuss State and National Workforce Needs in Semiconductor Manufacturing Sector, Chandler, Arizona, August 6, 2024.

○ Guest Speaker and Panelist at *Applied Math Agora: Challenges and opportunities at the confluence of semiconductor manufacturing (SM) and applied math (AM)*, Tucson, Arizona, April 12, 2024.

○ Guest Speaker at *Management and Information Systems Department Graduate Seminar Series*, Tucson, Arizona, February 9, 2024.

○ Poster presentation at *FUSENANO24 NSF-Sponsored Workshop*, The University of Arizona, Tucson, Arizona, February 19, 2024. **Best Poster of the Workshop Award Winner**

○ Invited Talk at *Temple University*, Virtual, December 6, 2023.

○ Guest Speaker at *Electrical and Computer Engineering Department Graduate Seminar Series*, Tucson, Arizona, November 2, 2023.

○ Invited Talk at *Everspin Technologies*, Chandler, Arizona, October 24, 2023.

○ Invited Talk at *Intel Product Assurance and Security (IPAS)*, Virtual, October 24, 2023.

○ Guest Speaker at *Systems and Industrial Engineering Department Graduate Seminar Series*, Tucson, Arizona, September 21, 2023.

○ Invited Talk at *Federated Cloud Platform for Networked Cyber-Physical Systems (FCP-NCPS) NSF-Sponsored Workshop, "Machine Learning Assisted Prediction and Risk Assessment Framework for Hardware Weaknesses within Cyberinfrastructure,"* Tucson, Arizona, February 8, 2023.

○ Guest Lecturer at *SIE 471/571: Systems Cyber Security Engineering*, Tucson, Arizona, May 11, 2023.

○ Guest Speaker at *Electrical and Computer Engineering Department Graduate Seminar Series*, Tucson, Arizona, October 27, 2022.

○ Poster presentation at *30th NITRD Symposium*, Washington, D.C., May 25, 2022.

○ Poster presentation at *CRA/CCC CIFellows 2022 Symposium*, Washington, D.C., May 26, 2022.

○ PowerPoint presentation at *the University of California Davis Postdoctoral Research Symposium 2021*, Davis, California, Virtual, March 31, 2021. **Best Presentation of the Symposium Award Winner.**

○ Poster presentation at *ACM DAC Ph.D. Forum*, Las Vegas, Nevada, June 3-6, 2019.

VII. Funding Proposals (Total Funded Awards: $3,705,621 (My Responsibility: $1,151,470))

A. Funded, Active, and Completed

[Internal] UArizona, RII, Provost Investment Fund   **Role: PI**
Award Amount: $178,400 (Responsibility: $178,400), Duration: 2 years   *End Date: June 30, 2027*
Title: "AI Hardware Design League (AI-HDL)"
Co-PIs: Liesl Folks, Janet Roveda, Pratik Satam, Angela Cruz, Banafsheh Saber Latibari

[External] U.S. Army   **Role: Co-PI**
Award Amount: $1,200,000 (Responsibility: $208,311), Duration: 2 years   *End Date: December 2027*
Title: "STTR Direct to Phase II: AI-Based Side Channel Attack for EW Cyber Offense and Defense"
Co-PIs: Blackfur Industries (PI), Loukas Lazos

[External] NSF, SaTC   **Role: Co-PI**
Award Amount: $300,000 (Responsibility: $100,000), Duration: 2 years   *Expired (End Date: September 30, 2025)*
Title: "EAGER: Education DCL: Generative AI-based Personalized Cybersecurity Tutor for Fourth Industrial Revolution"
Co-PIs: Pratik Satam (PI), Noel Hennessy

[Internal] UArizona, CSM, Arizona Commerce Authority   **Role: Senior Personnel**
Award Amount: $1,500,000 (Responsibility: $300,000), Duration: 2 years   Expired (End Date: December 31, 2025)
Title: "SemiXperience: Extended Reality Semiconductor Manufacturing Education and Workforce Development Framework"
Co-PIs: David Hahn (PI), Liesl Folks (PI), Mark Van Dyke (PI)

[Internal] UArizona, RII, TRIF 18th Mile   **Role: PI**
Award Amount: $30,000 (Responsibility: $30,000), Duration: 1 year   Expired (End Date: June 30, 2024)
Title: "CyberRiskMAPS: Machine-Learning-Assisted Prediction and Risk Assessment Cyberinfrastructure for Hardware Weaknesses"

[Internal] UArizona, RII, TRIF 18th Mile   **Role: Co-PI**
Award Amount: $119,830 (Responsibility: $27,106), Duration: 1 year   Expired (End Date: June 30, 2024)
Title: "Secure-CyPhyMan: End-to-End Manufacturing Cyberattacks Modeling, Prevention, Detection, and Diagnosis Approach to Secure Cyber-Physical Manufacturing Systems"
Co-PIs: Mohammed Shafae (PI), Pratik Satam

[Internal] UArizona, RII, International Collaboration Grant   **Role: Co-PI**
Award Amount: $48,357 (Responsibility: $16,119), Duration: 1 year   Expired (End Date: December 31, 2023)
Title: "Collaboratory for AI-enabled Resilient Smart Cyber-Physical Systems AI-RSCPS"
Co-PIs: Salim Hariri (PI), Ali Akoglu

[External] NSF, IUCRC: CHEST   **Role: Co-PI**
Award Amount: $75,000 (Responsibility: $37,500)   Expired (End Date: August 31, 2022)
Title: "SHERLOCK: Power Side Channel Attack-Resilient Hardware using Emerging Reconfigurable Devices and Logic Locking"
Co-PIs: Houman Homayoun (PI)

[External] NSF, CISE/CCF, CRA/CCC   **Role: PI**
Award Amount: $254,034 (Responsibility: $254,034), Duration: 2 years   Expired (End Date: August 31, 2022)
Title: "SHIELD: Secure Hardware for IoT using Emerging-devices against side-channeL Deep-learning attacks"