

Mahmoud Nazzal, Ph.D.

Computer Engineering — AI Security and Applications

Contact Information and Online Profiles

 ODU Faculty Website: <https://faculty.pages.cs.odu.edu/mahmoud-nazzal/>
 Personal Website: <https://mahmoudkanazzal.github.io>
 Email: [mnazzal\[at\]odu\[dot\]edu](mailto:mnazzal[at]odu[dot]edu)
 Phone: +1 757-683-7760
 LinkedIn: [mahmoud-nazzal](https://www.linkedin.com/in/mahmoud-nazzal)
 GitHub: <https://github.com/mahmoudkanazzal>
 Google Scholar: <https://scholar.google.com/citations?user=ygjUJnYAAAAJ>
 ORCID: <https://orcid.org/0000-0003-3375-0310>
 Web of Science: <https://www.webofscience.com/wos/author/record/ACR-5602-2022>
 Scopus: <https://www.scopus.com/authid/detail.uri?authorId=55292923900>
 Address: Room 3210, ENGR & COMP SCI BLDG, Norfolk, VA 23529, USA

Research Interests

Security, robustness, and trustworthy applications of large language models (LLMs) and graph neural networks (GNNs), with emphasis on:

- Adversarial robustness of GNNs and LLMs in cybersecurity, software security, and trustworthy AI applications
- Prompt optimization and engineering
- Real-world applications of LLMs and GNNs in:
 - Secure and functional source code generation
 - Internet security
 - Hardware design automation
 - Deepfake detection

Academic Appointments

Present Jul. 2025	Assistant Professor, Tenure-Track, Old Dominion University, Norfolk, VA, USA • Department of Computer Science; joint appointment with the School of Cybersecurity. • Trustworthy AI Cluster Hire. • Conducting research on LLM and GNN security and applications. • Supervising graduate students. • Teaching graduate courses in machine learning and LLMs.
May 2025 Sep. 2021	Research Assistant / Teaching Assistant, New Jersey Institute of Technology, Newark, NJ, USA • Conducted research on LLM and GNN security and applications. • Collaborated with industry partner HVantage Inc. on legal document analysis. • Lectured undergraduate courses in computer engineering.
Jul. 2021 Aug. 2019	Lecturer, Abu Dhabi Vocational Education and Training Institute, Abu Dhabi, UAE • Taught undergraduate electrical engineering courses and supervised student projects.
Jul. 2019 Jul. 2017	Researcher, Istanbul Medipol University, Istanbul, Turkey • Conducted research on machine learning for wireless communication technologies.
Jun. 2017 Sep. 2016	Lecturer, Izmir University of Economics, Izmir, Turkey • Taught electrical engineering courses and supervised graduation projects.
Jun. 2016 Sep. 2009	Research and Teaching Assistant, Eastern Mediterranean University, Famagusta, Cyprus • Supervised undergraduate labs and taught electrical and electronic engineering courses.

Education

May 2025 Sep. 2021	Ph.D. in Computer Engineering, New Jersey Institute of Technology, Newark, NJ, USA • GPA: 4.00/4.00 • Dissertation: <i>Adversarial Robustness in Advanced Sequential and Relational Machine Learning Models Integrating Graph Neural Networks and Large Language Models</i> • Supervisors: Prof. Abdallah Khreishah and Dr. Issa Khalil
Sep. 2010 Sep. 2009	M.Sc. in Electrical and Electronic Engineering, Eastern Mediterranean University, Cyprus • GPA: 3.77/4.00 • Thesis: <i>Color Demosaicing for Digital Camera Images</i>
Jun. 2009 Sep. 2004	B.Sc. in Electrical Engineering, Birzeit University, Ramallah, West Bank • Final-year project: <i>Power Factor Correction Using a Three-Phase Converter</i>

Research Grants and Funding

Dec. 2026	Intelligent Framework for Securing IoT Systems in Critical Infrastructure, Commonwealth Cyber Initiative (CCI), Award No. HC-2Q26-033
Jan. 2026	• Role: Principal Investigator; collaboration with George Mason University. • Amount: \$100,000.
Mar. 2027	Securing Mobile Agentic AI Systems: Systematic Risk Analysis and Defense Against Confused Deputy Behavior, COVA Commonwealth Cyber Initiative (CCI), Award No. 226278
Apr. 2026	• Role: Co-Principal Investigator; collaboration with College of William & Mary. • Amount: \$80,000.

Selected Awards and Honors

May 2025	Hashimoto Prize (\$5,000), NJIT, Newark, NJ, USA • Awarded annually at NJIT Commencement to an outstanding doctoral candidate for achievement, academic excellence, and distinguished research in Electrical and Computer Engineering. • Link to the award: NJIT award announcement
May 2025 Jul. 2022	New Jersey Institute of Technology, Newark, NJ, USA • Teaching Assistantship and Research Assistantship
Oct. 2024	ACM CCS 2024 Student Travel Grant, Salt Lake City, UT, USA
Jun. 2023	33rd Great Lakes Symposium on VLSI (GLSVLSI), Knoxville, TN, USA • Best Paper Award (2nd place) • Link to the award: GLSVLSI 2023 best paper awards
Jun. 2022 Sep. 2021	New Jersey Institute of Technology, Newark, NJ, USA • Ross Fellowship
Jun. 2021	Signal Processing and Communications Applications Conference (SIU 2021), Istanbul, Turkey • Best Paper Award (3rd place)
Oct. 2020	Turkish Patent and Trademark Office, Ankara, Turkey • 5th Place, <i>Second University Patent Competition</i>

Research Profile

- 17+ peer-reviewed journal papers and 30+ conference papers
- 1 book chapter
- 5 patents, patent applications, and invention disclosures
- 700+ citations (h-index: 15; i10-index: 22)

Selected Publications

Conference Papers (C)

- [C23] **M. Nazzal**, I. Khalil, A. Khreishah, and N. H. Phan, “PromSec: Prompt Optimization for Secure Generation of Functional Source Code with Large Language Models (LLMs)”, *31st ACM Conference on Computer and Communications Security (CCS 2024)*, Salt Lake City, UT, USA, Oct. 2024, [Acceptance rate: 16.7%], [Covered by a U.S. provisional patent.]
- [C22] **M. Nazzal**, I. Khalil, A. Khreishah, N. H. Phan, and Y. Ma, “Multi-Instance Adversarial Attack on GNN-Based Malicious Domain Detection”, *45th IEEE Symposium on Security and Privacy (IEEE S&P 2024)*, San Francisco, CA, USA, May 2024, [Acceptance rate: 17.8%].  [Presentation Video]
- [C21] A. Al-Barqawi, **M. Nazzal**, I. Khalil, A. Khreishah, and N. H. Phan, “ViGText: Deepfake Image Detection with Vision-Language Model Explanations and Graph Neural Networks”, *33rd Network and Distributed System Security Symposium (NDSS 2026)*, San Diego, CA, USA, Feb. 2026, [Acceptance rate: 16–18%].
- [C20] **M. Nazzal**^{*}, K. Nguyen^{*}, D. Vungarala^{*}, R. Zand, H. Phan, A. Khreishah, and S. Angizi, “FedChip: Federated LLM for Artificial Intelligence Accelerator Chip Design”, in *IEEE International Conference on LLM-Aided Design (ICLAD 2025)*, Stanford University, Stanford, CA, Jun. 2025 (^{*} Equal contribution).
- [C19] D. Vungarala^{*}, **M. Nazzal**^{*}, M. Morsali, C. Zhang, A. Ghosh, A. Khreishah, and S. Angizi, “SA-DS: A Dataset for Large Language Model-Driven AI Accelerator Design Generation”, *58th IEEE International Symposium on Circuits and Systems (IEEE ISCAS)*, London, UK, May 2025. (^{*} Equal contribution).
- [C18] T. K. Ton, N. Nguyen, **M. Nazzal**, A. Khreishah, C. Borcea, N. H. Phan, R. Jin, I. Khalil, and Y. Shen, “Demo: SGCode: A Flexible Prompt-Optimizing System for Secure Generation of Code”, *31st ACM Conference on Computer and Communications Security (CCS 2024)*, Salt Lake City, UT, USA, Oct. 2024.
- [C17] M. Morsali, **M. Nazzal**, A. Khreishah, and S. Angizi, “IMA-GNN: In-Memory Acceleration of Centralized and Decentralized Graph Neural Networks at the Edge”, *33rd ACM Great Lakes Symposium on VLSI (GLSVLSI 2023)*, Knoxville, TN, USA, Jun. 2023. [Best Paper Award]

Journal Papers (J)

- [J14] **M. Nazzal**, A. Khreishah, J. Lee, S. Angizi, A. Al-Fuqaha, and M. Guizani, “Semi-decentralized Inference in Heterogeneous Graph Neural Networks for Traffic Demand Forecasting: An Edge-Computing Approach”, *IEEE Transactions on Vehicular Technology*, Jan. 2024.

Patents (P)

- [P5] **M. Nazzal**, I. Khalil, A. Khreishah, and N. H. Phan, “Method and System for Prompt Optimization for Secure Generation of Functional Source Code with Large Language Models”, *WIPO (PCT) Patent Application*, Pub. No.: WO2025188204A1, 2025.
<https://patents.google.com/patent/WO2025188204A1/en>
(Related to [C23] PromSec, ACM CCS 2024)

Book Chapters (BC)

- [BC1] **M. Nazzal**, M. A. Aygul, and H. Arslan, *Channel Modeling for 5G and Beyond*, In: H. Arslan, E. Basar, *Flexible and Cognitive Radio Access Technologies for 5G and Beyond*, Telecommunications Series, Institution of Engineering and Technology, ISBN-13: 978-1-83953-079-1, p. 342, 2020.

Journal Articles: AI and Cybersecurity

- [J13] M. Anan, **M. Nazzal**, A. Khreishah, I. Khalil, N. H. Phan, and A. Sawalmeh, "STING: A Stealthy Backdoor Attack on GNN-Based Malicious Domain Detection via DNS Perturbations", *IEEE Open Journal of the Communications Society*, vol. 6, pp. 7823–7841, Sep. 2025.
- [J12] C. P. Vizcarra, S. Alhamed, A. Algosaibi, M. Alnaeem, A. Aldalbahi, N. Aljaafari, A. Sawalmeh, **M. Nazzal**, A. Khreishah, A. Alhumam, and M. Anan, "Deep Learning Adversarial Attacks and Defenses on License Plate Recognition System", *Cluster Computing*, vol. 27, no. 8, pp. 11627–11644, Nov. 2024.
- [J11] I. Alsmadi, K. Ahmad, **M. Nazzal**, F. Alam, A. Al-Fuqaha, A. Khreishah, and A. Algosaibi, "Adversarial NLP for social network applications: Attacks, defenses, and research directions", *IEEE Transactions on Computational Social Systems*, vol. 10, no. 6, pp. 3089–3108, Nov. 2022.
- [J10] N. Aljaafari, **M. Nazzal**, A. Sawalmeh, A. Khreishah, M. Anan, A. Algosaibi, M. Alnaeem, A. Aldalbahi, A. Alhumam, and C. P. Vizcarra, "Investigating the Factors Impacting Adversarial Attack and Defense Performances in Federated Learning", *IEEE Transactions on Engineering Management*, vol. 71, pp. 12542–12555, May 2022.
- [J9] I. Alsmadi, N. Aljaafari, **M. Nazzal**, S. Alhamed, A. Sawalmeh, C. P. Vizcarra, A. Khreishah, M. Anan, A. Algosaibi, M. Alnaeem, A. Aldalbahi, and A. Alhumam, "Adversarial Machine Learning in Text Processing: A Literature Survey", *IEEE Access*, vol. 10, pp. 17043–17077, Jan. 2022.
- [J8] H. M. Furqan, M. A. Aygöl, **M. Nazzal**, and H. Arslan, "Primary User Emulation and Jamming Attack Detection in Cognitive Radio via Sparse Coding", *EURASIP Journal on Wireless Communications and Networking*, no. 1, pp. 1–9, Apr. 2020.

Journal Articles: Machine Learning, Communications, and Signal Processing

- [J7] M. Aygöl, **M. Nazzal**, and H. Arslan, "Sparsifying dictionary learning for beamspace channel representation and estimation in millimeter-wave massive MIMO", *IEEE Access*, vol. 11, pp. 98436–98451, Sep. 2023.
- [J6] S. Shao, **M. Nazzal**, A. Khreishah, and M. Ayyash, "Self-optimizing Data Offloading in Mobile Heterogeneous Radio-Optical Networks: A Deep Reinforcement Learning Approach", *IEEE Network Magazine*, vol. 36, no. 2, pp. 100–106, May 2022.
- [J5] A. Alenezi, **M. Nazzal**, A. Sawalmeh, A. Khreishah, S. Shao, and M. Almutiry, "Machine Learning Regression-based RETRO-VLP for Real-time and Stabilized Indoor Positioning", *Cluster Computing*, vol. 27, pp. 299–311, Dec. 2022.
- [J4] M. A. Aygöl, **M. Nazzal**, and H. Arslan, "Using OMP and SD Algorithms Together in mm-Wave mMIMO Channel Estimation", *Signal, Image and Video Processing*, Springer, vol. 16, pp. 1205–1213, Jan. 2022.
- [J3] M. A. Aygöl, **M. Nazzal**, M. İ. Sağlam, D. B. da Costa, H. F. Ates, and H. Arslan, "Efficient Spectrum Occupancy Prediction Exploiting Multidimensional Correlations through Composite 2D-LSTM Models", *Sensors-Special Issue AI-Enabled Cognitive Radio Networks*, vol. 21, no. 1, pp. 135–153, Dec. 2020.
- [J2] **M. Nazzal**, A. R. Ekti, A. Gorcin, and H. Arslan, "Exploiting sparsity recovery for compressive spectrum sensing: A machine learning approach", *IEEE Access*, vol. 7, pp. 126098–126110, Apr. 2019.
- [J1] **M. Nazzal**, F. Yeganli, and H. Ozkaramanli, "A strategy for residual component-based multiple structured dictionary learning", *IEEE Signal Processing Letters*, vol. 22, no. 11, pp. 2059–2063, Nov. 2015.

Conference Papers

- [C16] S. Satpathy, **M. Nazzal**, and A. Khreishah, "Learning Ray-Tracing Propagation with Graph Neural Networks for Efficient Base Station Planning", accepted for presentation at the *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2026)*, Singapore, Sep. 2026.
- [C15] **M. Nazzal**, N. Aljaafari, A. Sawalmeh, A. Khreishah, M. Anan, A. Algosaibi, M. Alnaeem, A. Aldalbahi, A. Alhumam, C. P. Vizcarra, and S. Alhamed, "Genetic Algorithm-Based Dynamic Backdoor Attack on Federated Learning-Based Network Traffic Classification", *8th International Conference on Fog and Mobile Edge Computing (FMEC 2023)*, Tartu, Estonia, Sep. 18–20, 2023.
- [C14] M. A. Aygöl, **M. Nazzal**, and H. Arslan, "Estimating Multi-Dimensional Sparsity Level for Spectrum Sensing", *2023 IEEE Wireless Communications and Networking Conference (WCNC 2023)*, Glasgow, Scotland, UK, Mar. 2023.

Conference Papers (continued)

- [C13] M. A. Aygöl, H. M. Furqan, **M. Nazzal**, and H. Arslan, “Deep Learning-Assisted Detection of PUEA and Jamming Attacks in Cognitive Radio Systems”, *2020 IEEE 92nd Vehicular Technology Conference: VTC2020-Fall*, Victoria, BC, Canada, Oct. 2020.
- [C12] **M. Nazzal**, A. Sawalmeh, S. Shao, M. Anan, A. Khreishah, and A. Alanazi, “Retro-VLP: Towards Single Light Source-based Real-time Indoor Positioning”, *International Conference on Information and Communication Systems (ICICS 2022)*, Irbid, Jordan, Jun. 2022.
- [C11] **M. Nazzal**, M. A. Aygöl, and H. Arslan, “Estimation and Exploitation of Multidimensional Sparsity for MIMO-OFDM Channel Estimation”, *2022 IEEE Wireless Communications and Networking Conference (WCNC 2022)*, Austin, TX, USA, Apr. 2022.
- [C10] M. A. Aygöl, **M. Nazzal**, and H. Arslan, “Deep RL-Based Spectrum Occupancy Prediction Exploiting Time and Frequency Correlations”, *2022 IEEE Wireless Communications and Networking Conference (WCNC 2022)*, Austin, TX, USA, Apr. 2022.
- [C9] **M. Nazzal**, M. A. Aygöl, and H. Arslan, “Sparse Coding with Enhanced Atom Selection for FDD Massive MIMO Channel Estimation”, *2021 IEEE 94th Vehicular Technology Conference: VTC2021-Fall*, Norman, OK, USA, Sep. 2021.
- [C8] M. A. Aygöl, **M. Nazzal**, and H. Arslan, “Using OMP and SD Algorithms Together in Millimeter Wave Massive MIMO Channel Estimation”, *Signal Processing and Communications Applications Conference (SIU 2021)*, Istanbul, Turkey, Jun. 2021. [Best Paper Award]
- [C7] M. A. Aygöl, **M. Nazzal**, and H. Arslan, “Deep Learning-Based Optimal RIS Interaction Exploiting Previously Sampled Channel Correlations”, *2021 IEEE Wireless Communications and Networking Conference (WCNC 2021)*, Nanjing, China, Mar. 2021.
- [C6] M. A. Aygöl, **M. Nazzal**, A. R. Ekti, A. Gorcin, D. B. da Costa, H. F. Ates, and H. Arslan, “Spectrum Occupancy Prediction Exploiting Time and Frequency Correlations Through 2D-LSTM”, *2020 IEEE 91st Vehicular Technology Conference: VTC2020-Spring*, Antwerp, Belgium, May 2020.
- [C5] **M. Nazzal**, O. Hasekioğlu, A. R. Ekti, A. Gorcin, and H. Arslan, “Compressed spectrum sensing using sparse recovery convergence patterns through machine learning classification”, *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2019)*, Istanbul, Turkey, Sep. 2019.
- [C4] **M. Nazzal**, M. A. Aygöl, A. Görçin, and H. Arslan, “Dictionary learning-based beamspace channel estimation in millimeter-wave massive MIMO systems with a lens antenna array”, *International Wireless Communications & Mobile Computing Conference (IWCMC 2019)*, Tangier, Morocco, Jun. 2019.
- [C3] **M. Nazzal**, M. A. Aygöl, A. Görçin, and H. Arslan, “Sparse Coding for transform domain-based sparse OFDM channel estimation”, *Signal Processing and Communications Applications Conference (SIU 2019)*, Sivas, Turkey, Apr. 2019.
- [C2] **M. Nazzal**, H. M. Furqan, and H. Arslan, “FDD massive MIMO channel estimation by sparse coding over AoA/AoD cluster dictionaries”, *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2018)*, Bologna, Italy, Sep. 2018.
- [C1] H. M. Furqan, **M. Nazzal**, and H. Arslan, “Iterative tap pursuit for channel shortening equalizer design”, *7th International Conference on Computer and Communication Engineering (ICCCCE 2018)*, pp. 416–420, Kuala Lumpur, Malaysia, Sep. 2018.

Selected Presentations

- [S4] **M. Nazzal**, “Intelligent Framework for Securing IoT Systems in Critical Infrastructure,” Workshop on Critical Infrastructure, Commonwealth Cyber Initiative Symposium 2026, Richmond, VA, USA, April 13–14, 2026. (In person)
- [S3] **M. Nazzal**, I. Khalil, A. Khreishah, and N. H. Phan, “PromSec: Prompt Optimization for Secure Generation of Functional Source Code with Large Language Models (LLMs),” 31st ACM Conference on Computer and Communications Security (CCS 2024), Salt Lake City, UT, USA, Oct. 2024. *Covered by a U.S. provisional patent.* (In person)
- [S2] **M. Nazzal**, I. Khalil, A. Khreishah, N. H. Phan, and Y. Ma, “Multi-Instance Adversarial Attack on GNN-Based Malicious Domain Detection,” 45th IEEE Symposium on Security and Privacy (IEEE S&P 2024), San Francisco, CA, USA, May 2024.  [Presentation Video]. (In person)

Selected Presentations (continued)

- [S1] **M. Nazzal**, N. Aljaafari, A. Sawalmeh, A. Khreishah, M. Anan, A. Algosaibi, M. Alnaeem, A. Aldalbahi, A. Alhumam, C. P. Vizcarra, and S. Alhamed, “Genetic Algorithm-Based Dynamic Backdoor Attack on Federated Learning-Based Network Traffic Classification,” 8th International Conference on Fog and Mobile Edge Computing (FMEC 2023), Tartu, Estonia, Sep. 18–20, 2023. (Online)

Patents and Invention Disclosures

(Patented systems in secure machine learning and wireless security; protection pursued across the United States, Europe, and internationally via WIPO.)

Issued Patents

- [P4] M. A. Ayg l, **M. Nazzal**, and H. Arslan, “Learning-Based Spectrum Occupancy Prediction Exploiting Multi-Dimensional Correlation”, *U.S. Patent*, No.: US12526644B2, Jan. 13, 2026.
[Google Patents record](#)
- [P3] M. A. Ayg l, H. M. Furqan, **M. Nazzal**, and H. Arslan, “Primary User Emulation / Signal Jamming Attack Detection Method”, *U.S. Patent*, No.: US12177005B2, Dec. 24, 2024.
[Google Patents record](#)

Invention Disclosures Under Evaluation

- [P2] A. AlBarqawi, I. M. Khalil, A. Khreishah, N. H. Phan, **M. Nazzal**, “ViGText: Deepfake Detection Using Vision–Language Model Explanations and Graph Neural Networks”, *Invention Disclosure (Under Evaluation for Patent Filing)*, HBKU IP Office, 2025.
- [P1] A. AlBarqawi, I. M. Khalil, A. Khreishah, N. H. Phan, **M. Nazzal**, “CAPTCHA Framework Using Perceptual Puzzles for Enhanced Robustness Against Vision–Language Model Attacks”, *Invention Disclosure (Under Evaluation for Patent Filing)*, HBKU IP Office, 2025.

Student Mentoring

Aug. 2026	Faculty Advisor, NSF REU Site: Graph Learning and Network Analysis (GraLNA 2026), Old Dominion University, Norfolk, VA, USA
Jun. 2026	Faculty advisor for an NSF-funded undergraduate research program in graph machine learning and network analysis.
Aug. 2023	Faculty Advisor, NJIT Undergraduate Summer Research and Innovation Symposium (Provost URI Summer Research Fellowship), Newark, NJ, USA
Jun. 2023	Mentored summer interns Youssef Kanani and Pulami Basu, whose works were published in the NJIT annual conference proceedings.
Aug. 2022	Faculty Advisor, NJIT Undergraduate Summer Research and Innovation Symposium (Provost URI Summer Research Fellowship), Newark, NJ, USA
Jun. 2022	Mentored summer intern Oscar Mahecha-Benitez whose work was published in the NJIT annual conference proceedings.

Workforce Training

Summer 2026	School of Data Science, Old Dominion University, Norfolk, VA, USA Invited Faculty Lecturer in Data Science and AI Bootcamp 2026. Invited to deliver hands-on AI bootcamp training for U.S. Navy research staff, emphasizing applied data science, generative AI workflows, and Google Cloud-based exercises.
-------------	---

Teaching and Curriculum Development

Present Aug. 2025	Old Dominion University, Norfolk, VA, USA Assistant Professor, Graduate Teaching and Curriculum Development: • CS 795/895 – Topics in Computer Science: LLM Architectures & Applications (Spring 2026) Syllabus (PDF) • CS 722/822 – Machine Learning (Fall 2025) Syllabus (PDF) • Online course development: Designed and implemented a fully online 8-week graduate Machine Learning course, including lecture modules, assignments, assessments, and multimedia learning materials.
May 2024 Sep. 2022	New Jersey Institute of Technology, Newark, NJ, USA Lecturer, Courses Taught: • Microprocessors ▪ Course evaluation: 3.29/4.00 • Computer Architecture and Organization ▪ Course evaluation: Fall 3.69/4.00, Spring 3.24/4.00
Jul. 2021 Aug. 2019	Abu Dhabi Vocational Education and Training Institute, Abu Dhabi, UAE Lecturer, Courses Taught: • Robotics • Circuit Analysis • Engineering Communications • Graduation Project
Jun. 2017 Sep. 2016	Izmir University of Economics, Izmir, Turkey Lecturer, Courses Taught: • Graduation Project • Introduction to Programming (with Java) • Electric Circuits • Digital Electronics
Jun. 2016 Sep. 2015	Eastern Mediterranean University, Famagusta, Cyprus Lecturer, Courses Taught: • Introduction to Logic Design • Introduction to Programming (with C) • Fundamentals of Electrical and Electronic Engineering

Technical Skills

AI Programming Environments	PyTorch, TensorFlow, scikit-learn, PyG, DGL
LLM-Related Skills	Retrieval-augmented generation (RAG), vector databases, semantic search
Programming Languages	MATLAB, Python, C/C++, Java
Cluster Computing Infrastructure	High-performance computing (HPC): Slurm (Wulver), CPU/GPU nodes, parallel storage, Hadoop , and Apache Spark
Embedded Systems	Microcontrollers, Arduino
Scientific and Professional Skills	Technical and scientific writing, grant proposal development
Computer Literacy	Microsoft Windows, Microsoft Office, Linux, $\text{\LaTeX}$

Professional Memberships

- Institute of Electrical and Electronics Engineers (IEEE), Member (10 years)
- IEEE Young Professionals Program, Member
- Association for Computing Machinery (ACM), Professional Member (2 years)
- ACM Special Interest Group on Security, Audit and Control (ACM SIGSAC), Member (2 years)

Academic and Professional Service

Conference Program Committees

- Program Committee Member — ACM Conference on Computer and Communications Security (ACM CCS), Poster Track, 2026
- Program Committee Member — ACM Conference on Computer and Communications Security (ACM CCS), Demo Track, 2026
- Technical Program Committee Member — The 37th IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2025

Journal Peer Reviewer

- IEEE Transactions on Dependable and Secure Computing
- ACM Transactions on Software Engineering and Methodology
- IEEE Transactions on Reliability
- IEEE Transactions on Networking
- IEEE Internet of Things Journal
- IEEE Wireless Communications Letters
- IEEE Access
- Signal Processing
- Physical Communication
- Signal, Image and Video Processing
- Mathematical Problems in Engineering
- International Journal of Wireless Information Networks

Institutional and Departmental Service

- Committee Member — Hiring Committee, School of Cybersecurity, Old Dominion University, Spring 2026
- Committee Member — CS Graduate Scholarship Awards Committee, Department of Computer Science, Old Dominion University, Fall 2025

Faculty Development and Training

Research-Focused Faculty Development

- **2026 NSF SaTC Aspiring PIs Workshop**, Washington, D.C., Oct. 19–20, 2026
 - Selected participant from 350+ applicants; focus on NSF SaTC PI and research proposal development.
- **Early Career Faculty Research Proposal Development Academy (2025–2026)**, Old Dominion University (ODU), Norfolk, VA
 - *Focus:* Inaugural cohort training in research agenda development, funding strategies, sponsor intelligence, and competitive proposal writing.
 - *Provider:* ODU Office of Research.
- **Excite the Dream ODU (Sept. 2024)**
 - *Focus:* Orientation to faculty roles, academic expectations, and hiring processes.
 - *Provider:* ODU Office of Faculty Recruitment and Retention.

Teaching and Instructional Development

- **Designing Your Online Course, Quality Matters (QM) (2026)**
 - *Focus:* Certified course design aligned with Quality Matters (QM) standards for online and hybrid instruction.
 - *Provider:* Quality Matters.
- **Design Your Own Course (DYOC) Workshop (Jan. 2026)**
 - *Focus:* Instructional design principles for online and hybrid course development.
 - *Provider:* ODUGlobal, ODU.
- **Online Course Development: CS 722/822 – Machine Learning (2026)**
 - *Focus:* Developing a fully online graduate Machine Learning course with multimedia content and assessment design.
 - *Provider:* ODUGlobal, ODU.
- **Faculty Certificate in Smart Learning (Mar. 2020)**
 - *Focus:* Online pedagogy, digital learning environments, and technology-enhanced instruction.
 - *Provider:* Hamdan Bin Mohammed Smart University, UAE.

Languages

Arabic: Native proficiency

English: Fluent

Turkish: Intermediate proficiency