Nariman Torkzaban

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Programming: C/C++, MATLAB, Java, Python, JavaScript, HTML, CSS, TLA+, P4
Technical: OFDM, CDMA, LTE, 5G, 4G LTE, MAC&PHY Design

Education

- **University of Maryland, College Park** — College Park, MD
  Ph.D. in Electrical Engineering; GPA: 4.00 — *Expected: Jan. 2019 – Dec. 2023*
- **University of Maryland, College Park** — College Park, MD
  MS in Telecommunications Engineering; GPA: 4.00 — *Sep. 2017 – Dec. 2018*
- **Sharif University of Technology** — Tehran, Iran
  BS in Electrical Engineering, Minor in Mathematics — *Sep. 2012 – July. 2017*

Experience

- **Institute for Systems Research & University of Maryland** — College Park, MD
  Graduate Research Assistant — *Jan. 2018 - Present*
  - **Network Anomaly Detection using Machine Learning**: Developed multiple ML-based approaches for network intrusion detection with up to 96% accuracy. **(Python)**(In Progress)
  - **Joint Satellite Gateway Placement and Routing in Hybrid Space-Ground Networks**: Developed a cost-effective deployment scheme to satisfy sub-ms latency and polynomial solution time by an LP-based heuristic approach. (Accepted at IEEE ICC 2020)**(Java, Python)**
  - **Mobility-Aware UAV Placement and Route Optimization for MANETs**: Designed a scheme to drive the unsupported traffic demand to zero by a cost-optimal placement of aerial platforms. (Submitted to WCNC 2020)
  - **Trust-Aware Service Function Chain Embedding**: Developed a security-aware resource allocation method for virtual network function embedding on a data center infrastructure by exploiting the trustworthiness level of the servers. (In proceedings of IEEE SDS 2019)**(Java, Python)**
  - **Design and Performance Analysis of a Mobile Ad-Hoc Network** : Designed a MANET with maximum throughput using a loss network, fixed-point method and automatic differentiation. **(C++, Java, MATLAB)**
- **Steer-Tech** — Columbia, MD
  Software Engineering Intern — *Jul. 2018 - Aug. 2018*
  - **Server-Client-Database Architecture Development**: Designed an architecture for reading/writing binary and non-binary data from/to server/database **(C/C++, JavaScript, HTML, CSS)**
  - **Middle-ware Client Improvement** : Improved the client side of a middle-ware in order to be able to maintain the TCP/UDP communication with the server without crashing in a non-blocking mode **(C/C++)**
  - **Designing a Data Visualization Tool**: Designed a visualizer to mark the service data using Google API

Skills

- **Technical Tool& Software**: IBM Optimization Suite, MATLAB, NS2, NS3, CORE, Mininet, TLC, OPNET, CPLEX, Gurobi, Knitro, Packet Tracer, Node JS, PostgreSQL, MySQL, Linux, Latex
- **Languages**: English(Fluent), Persian(Fluent), Arabic(Exposure)

Honors & Awards

- **Selected as the only recipient of the "MS in Telecommunications director's choice for scholarly excellence" award.** Feb. 2019
- **Recipient of two fellowships by National Elite Foundation and AZAD University based on academic success.** Aug. 2016
- **Ranked 19th among more than 270,000 Participants in Konkoor(Iranian Nationwide Universities Entrance Exam) For BSc degree in Engineering** Jul. 2012
- **Ranked 3rd among more than 220,000 participants in The Azad University Entrance Exam (Nongovernmental Universities Konkoor) For BSC degree in Engineering** Jul. 2012