

NAHID ASLANI AMOLI

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Status: Permanent Resident of USA (Green Card Holder)

EDUCATION

❖ Fall 2016-present

- **PhD student** at School of Electrical and Computer Engineering (ECE), Georgia Institute of Technology, Atlanta, GA, USA.
- Current **GPA: 3.75/4**
- **Advisor:** Prof. Madhavan Swaminathan

❖ Fall 2016-Summer 2018

- **M.S.** Electrical and Computer Engineering (ECE), Georgia Institute of Technology, Atlanta, GA, USA.
- **GPA: 3.66/4**

❖ 2010- 2013 (Incomplete)

- **PhD candidate** in Electrical Engineering (Power System), Iran University of Science & Technology (IUST), Iran
- **GPA: 18.45** in 0-20 scale
- **Thesis Title:** Stochastic Joint Energy and Reserve Market Clearing Considering Distributed Energy Resources Under Uncertainties
- **Advisors:** Prof. Shahram Jadid and Prof. Heidar Ali Shayanfar

❖ 2005-2008

- **M.S.** Electrical Engineering (Electric Power Systems), Iran University of Science & Technology (IUST), Iran
- **GPA: 17.90** in 0-20 scale
- **Thesis Title:** Allocation of Transmission Cost and Loss by Optimal Real Power Tracing Method
- **Advisor:** Prof. Shahram Jadid

❖ 2000-2005

- **B.S.** Electrical Engineering (Power Engineering), Iran University of Science & Technology (IUST), Iran
- **GPA: 14.78** in 0-20 scale
- **Thesis Title:** Study of Unified Power Flow Controller (UPFC) Effect on Power System Oscillations Damping
- **Advisor:** Prof. Ahad Kazemi

RESEARCH INTERESTS:

- | | |
|-----------------------------------|----------------------------------|
| ❖ Renewable Energies | ❖ Microwave Design |
| ❖ Energy Storage Systems | ❖ Fabrication & Characterization |
| ❖ Electronic Packaging | ❖ CAD |
| ❖ Thermal Management in packaging | ❖ Uncertainty Quantification |

COMPUTER SKILLS:

- ❖ **Programming:** MATLAB, Python

- ❖ **Softwares:** ADS/Momentum, ANSYS HFSS, ANSYS Workbench, CST Microwave Studio, MATLAB, SolidWorks, AutoCAD, PowerWorld, OpenDSS, PSCAD, GAMS, Microsoft Office

PUBLICATIONS:

- [1] “*Screen-printed Flexible Coplanar Waveguide Transmission Lines: Multi-Physics Modeling and Measurement*”, 2019 IEEE 69th Electronic Components and Technology Conference (ECTC), Las Vegas, NV.
- [2] “*Study of Electrical and Mechanical Characteristics of Inkjet-Printed Patch Antenna under Uniaxial and Biaxial Bending*”, 2019 IEEE 69th Electronic Components and Technology Conference (ECTC), Las Vegas, NV.
- [3] “*Multi-physics Modeling and Characterization of Screen-Printed Flexible Coplanar Waveguide Transmission Lines*”, Presented at Flex 2019 as student poster, Monterey, CA, Feb 2019.
- [4] “*Operational Flexibility Enhancement in Power Systems with High Penetration of Wind Power Using Compressed Air Energy Storage*”, IEEE Power Systems Conference (PSC), Clemson University, SC, USA, 2015.
- [5] “*Solving Economic Dispatch Problem with Cubic Fuel Cost Function by Firefly Algorithm*”, 8th International Conf. on Technical and Physical Problems of Power Engineering (ICTPE), Norway, Sep. 2012.
- [6] “*Allocation of Loss Cost by Optimal and Proportional Tracing Methods*”, The 2nd IEEE International Conference on Power and Energy (PECon), Malaysia, 2008.
- [7] “*Factoring the Price Elasticity of Demand in the Optimal Power Flow*”, The 8th International Power Engineering Conference (IPEC), Singapore, 2007.

SELECTED TECHNICAL REPORTS:

- ❖ “*Designing a DC-DC boost converter*”, Power electronic circuits course, Fall 2016.
- ❖ “*Charging electric vehicles by PV-powered homes using a smart phone application*”, Principles of smart electricity grids course, Spring 2017.
- ❖ “*Single-stub and double-stub matching networks: Design, simulation and optimization*”, Microwave design course, Spring 2018.
- ❖ “*Microstrip lowpass and bandpass filters: Design, simulation and fabrication*”, Microwave design course, Spring 2018.
- ❖ “*Design of directional couplers based on lumped elements and transmission lines*”, Microwave design course, Spring 2018.
- ❖ “*Designing the package clock distribution network using H-tree*”, Intro to Electronic Systems Packaging course, Spring 2019.
- ❖ “*Design and characterization of signal and power integrity in a high-speed printed circuit board*”, Intro to Electronic Systems Packaging course, Spring 2019.
- ❖ “*Multilayer High-Density Interconnect (HDI) Board Fabrication using Semi-Additive Process (SAP)*”, Lab report: Electronic Packaging Substrate Fabrication course, Fall 2019.

WORK EXPERIENCES:

- ❖ Graduate Research Assistant at 3D Systems Packaging Research Center (PRC), Georgia Institute of Technology, engaged in the following projects:
- ❖ Flexible Hybrid Electronics Process Design Kit (Phase-I), Spring 2018 – Spring 2019.
 - Electrical measurements of CPW transmission lines up to 10 GHz using VNA in both the flat and bent conditions
 - Study the effect of bending on the performance of CPW lines through modeling in ANSYS HFSS

- Design and measurements of rectangular patch antennas up to 10 GHz using VNA in both the flat and bent conditions
- Study the effect of bending on the performance of patch antennas through modeling in ANSYS HFSS
- ❖ Thermal management of electronic packages for 6G module using vapor chamber, Summer 2019.
 - Feasibility study of using vapor chamber (VC) for thermal management of sub-THz RF modules through modeling in SolidWorks & ANSYS Workbench
- ❖ Exploration of Corning Ultra-thin Alumina Ribbon Ceramic (ARC) for mm-wave applications, Fall 2019- present.
 - Design, fabrication and measurement of test vehicle (TV) to characterize 40um-thick ARC in W & D frequency bands
 - Working at the cleanroom doing semi-additive process (SAP) fabrication on ARC including Sputtering, Vacuum lamination, Photolithography, Electroless/electrolytic plating, Wet & Dry etching, Sample inspection with Optical Microscope
 - Design lowpass & bandpass filters and via characterization TV on 80um-thick ARC
 - Thermal management of RF power amplifier (PA) module using copper TPVs in ARC through modeling in ANSYS Workbench
- ❖ Graduate Teaching Assistant, ECE3300: Electromechanical and Electromagnetic Energy Conversion, Georgia Institute of Technology, Fall 2017.
- ❖ Graduate Research Assistant for Course Preparation, GridEd Project, EPRI, Fall 2016, Spring & Summer 2017.
- ❖ Graduate Teaching Assistant, ECE3072: Electrical Energy Systems, Georgia Institute of Technology, Fall 2016, Spring & Summer 2017.
- ❖ Presenting Workshop about Iran Electricity Market at Iran University of Science and Technology (IUST), May 2011.
- ❖ Electrical Engineer (Sep. 2008- Sep. 2010) at the Iran Grid Management Company (IGMC), Iran Electricity Market.
- ❖ Internship at Amol Electric Distribution Company, Summer 2003.