Osama Waqar Bhatti

osamawaqarbhatti@gatech.edu • +1 (470) 3386720 • http://www.linkedin.com/in/owbhatti

EDUCATION

Georgia Institute of Technology, Atlanta GA 30318

- PhD in Electrical and Computer Engineering — Aug 2018 – Present
  - Cumulative GPA: 4.0 / 4.0
  - Focus: Wireless IC Design, Microwave Design, Deep Learning
  - Advisor: *Madhavan Swaminathan*

Technical University of Munich, Munich, Germany 80333

- Masters in Communications Engineering (1 sem) — Oct 2017 – Mar 2018
  - Cumulative GPA: 2.3 / 1.0
  - Focus: Information Theory, Electronic Design Automation, Adaptive filtering

National University of Sciences and Technology, Islamabad, Pakistan 44000

- Bachelors in Electrical Engineering — Sep 2013 – Jun 2017
  - Cumulative GPA: 3.93 / 4.00
  - Thesis: Heterogeneous Networks Performance Analysis , Adviser: Syed Ali Hassan
  - Focus: Electronics, VLSI Design, Machine Learning

RESEARCH EXPERIENCE

Center for Advanced Electronics through Machine Learning [CAEML] , Georgia Tech

- Graduate Research Assistant — Sep 2018 – present
  - Analyzed the bottlenecks in Power Delivery CAD tools
  - Analyzed Power Delivery Network impedance and its dependence on physical parameters

Information Processing and Transmission Lab, NUST

- Undergraduate Research Student — May 2016 – Sep 2017
  - Studied the effect of Decoupled Downlink-Uplink access in communication networks with different blockage scenarios
  - Developed MATLAB code for system level simulation of mobile communication networks

PUBLICATIONS

O. Bhatti, M. Swaminathan "Impedance Response Extrapolation of Power Delivery Networks using Recurrent Neural Networks," in ***IEEE Conference on Electrical Performance Electronic Packaging and Systems (EPEPS)*** , Montreal, Canada, Oct 2019.

O. Bhatti, H. Suhail, U. Akber, S. A. Hassan, H. Pervez, L. Musavian, Q. Ni "Performance analysis of decoupled cell association in multi-tier hybrid networks using real blockage environments," in ***IEEE International Wireless Communications and Mobile Computing Conference (IWCMC)***, Valencia, Spain, Jun 2017.

PROFESSIONAL EXPERIENCE

Nomor Research GmbH, Munich, Germany 81541

- WerkStudent - Multimedia Delivery — Feb 2018 – Mar 2018
  worked on DASH validation software used by multiple vendors to test their products' standards compliance.

Schlumberger Oilfield Services ,Islamabad, Pakistan

- Summer Intern — Jun 2016 – Aug 2016
  Analysed production services platform tool from wireline services

PROJECTS

Performance Analysis of Multi-tier Hybrid Networks — Oct 2016 – Jun 2017
Analyzed rate and coverage of 5G heterogeneous networks with decoupled uplink and downlink access including millimeter wave small cells using simulations and stochastic geometry

Autonomous Driving: Steering Angle Prediction — Nov 2016 – Feb 2017
Implemented convolution neural network in FPGA Virtex 5 to predict self-driving car's steering on the basis of live feed from the camera and further evaluated latency and throughput when compared with current GPU-based solutions

SKILLS

HFSS, Pytorch, MATLAB, Advanced Design System, Xilinx, Embedded C/C++, OrCAD, Proteus, Altium, Modelsim, LabView STMcube 32