Ali Tayefeh Younesi – Curriculum Vitae

Biographical Information

Date Of Birth: May,17,1995
Place Of Birth: Tabriz, Iran
Country of citizenship: Iran

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Education

Sharif University Of Technology 2017-2020

– M.Sc., Micro and Nano Electronic Devices
- Supervisor: Prof. Bizhan Rashidian
- Thesis: Design and Fabrication of Tips for Scanning Probe Lithography Systems
- GPA: 18.62/20 (4/4)

University Of Tabriz 2013-2017

– B.Sc., Electronics Engineering
- Supervisor: Prof. Ali Rostami
- Thesis: Implementation of a system for small vibration detection of a surface
- GPA: 16.9/20 (3.57/4) (Last two years: 18.52/20 (3.88/4))

Honors and Awards

– Ranked 1st in the class of 2017 (major of micro and nano-electronic devices), in terms of cumulative GPA.
  - Sharif University of Technology

– Ranked 10th in the Department of Electrical Engineering (all majors) among nearly 160 entrants of 2017, in terms of cumulative GPA.
  - Sharif University of Technology

– Ranked 19th in M.Sc. Electrical Engineering University Entrance Examination (among 31,000+ contestant) and 6th in Electronics Concentration, Summer 2017

– Ranked 18th in the 22nd National Scientific Olympiads for University Students in Electrical Engineering, Summer 2017

– Ranked 1st in the first National Robotics Tournament Hegmatan Cup (among about 40 teams), Hamedan, Iran, Summer 2015
  - project: Line Follower Robot

– Ranked among the 1% in the National University Entrance Examination - Mathematics and Physics Group, Summer 2013

Research Interests

- Scanning Probe Microscopy/Lithography
- Nano-Electronics
- Near-Field Optics
- Photonics
- Quantum Optics

Expierence and Projects

- Experience of wroking in cleanroom with the following equipments: 2017-2019
  - Spin coater and photolithography machine
  - Sputtering deposition machine
  - Evaporation PVD machine
  - Wet etching systems
  - Vacuum pumps, gauges, and chambers
  - Helium leak detector system
- Experience of working with Nanopositioning stage, Lock-in Amplifier, Electrometer, and optical components 2018-2020
- Design and implementation of a Shear-Force microscopy and lithography system using Quartz Tuning Fork 2019
- Implementation of a Michelson interferometer setup to measure the displacement of the Piezo Tube 2019
- Fabrication of Silicon tips 2019
- Design and implementation of a scratching nanolithography system using Scanning Tunneling Lithography (STL) 2017-2019
- Calculating the Van der Waals force between two custom shape objects using numerical calculation in MATLAB 2019
- Implementation of a reproducible electrochemical etching system for STM tip fabrication 2019
- Design and implementation of an optical measurement setup for characterization thr nanopositioning stage with resolution of about 10 nm 2018
- Laser-assisted carbon nanotube growth on Silicon tips using near-field enhancement 2018
- Analysis and simulation of IC interconnects Characteristics in COMSOL Multiphysics 2017
- Analysis and simulation of crosstalk in global IC interconnects in Hspice 2017
- Implementation of a system for small vibration detection of a surface using IR sensor reflection 2017
- Implementation of an AM radio transmitter 2016
- Solving the Knight's tour problem in Assembly Coding Language with Emu8086 Microprocessor Emulator 2016
- Implementation of a tachometer (RPM gauge) and closed loop motor speed control circuit using microcontrollers 2015
- Building a quadcopter with DJI Naza-M light flight controller 2015
- Building a fast line follower robot 2014

Research Assistantships

Prof. Bizhan Rashidian 2017-2020
Sharif Universty of Technology
- Full-time RA in Micro-Technology and Nano-Electronics lab

Teacher Assistantships

Sharif University Of Technology
- Principles of Solid State Devices (Undergrad.) Spring 2019
  Prof. R. Sarvari
- Semiconductor Technology (Grad.) Fall 2018
  Prof. B. Rashidian
- Principles of Solid State Devices (Undergrad.) Spring 2018
  Prof. B. Rashidian

Selected Courses

Sharif University of Technology
- Semiconductor Technology
- Optoelectronics
- Laser Applications
- Applied Quantum Mechanics
- Adv. Solid State Physics
- Adv. Solid State Devices

University of Tabriz
- CMOS Integrated Circuits
- Telecommunication Circuits and Lab.
- Electronics I II, III, and Labs

Skills and Abilities

Softwares:
Altair Feko, Comsol Multiphysics, Matlab, Silvaco TCAD , Lumerical FDTD Solutions, Altium Designer, Hspice, Orcad, Codevision, Excel, Visio

Programming Language:
C, Assembly

Languages

- Azerbaijani: Mother toungue
- Persian: Native
- English: Fluent, TOEFL Score: 96 (Reading, Listening, and Speaking=23, Writing=27)

Membership and Volunteer Work

- Member of Smart Grid Committee, Tabriz University 2015-2017
- Member of conductor committee in the 4th International Congress of Electric Industry (volunteer work) Feb 2016
- Electronic Concentration Manager of International Energy Agency (IEA), East-Azerbaijan Branch 2016
- Vice-President of Robotic committee, Tabriz University 2015