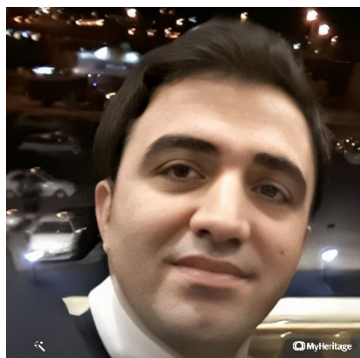


Khalil Safari



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Address: Tabriz, East Azerbaijan, Iran
Date of birth: 25/03/1985

Education

| | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------------|-------|----------------------------|-------|---|-------|-----------------------|-------|-------------------------|---------|------------------------|-------|----------------|-------|--------------------|-------|------------------------|-------|
| Dates | 2015 - 2020 | | | | | | | | | | | | | | | | | | |
| Institution | Sahand University of Technology | | | | | | | | | | | | | | | | | | |
| Field of study | Electrical Engineering (Optoelectronics) | | | | | | | | | | | | | | | | | | |
| Title of qualification awarded | Doctoral Degree | | | | | | | | | | | | | | | | | | |
| GPA | 19.21 out of 20 | | | | | | | | | | | | | | | | | | |
| Title of thesis | Analysis of all optical signal processing systems | | | | | | | | | | | | | | | | | | |
| Supervisor | Dr. Amir Habibzadeh-Sharif | | | | | | | | | | | | | | | | | | |
| Dates | 2013 - 2015 | | | | | | | | | | | | | | | | | | |
| Institution | University of Tabriz | | | | | | | | | | | | | | | | | | |
| About the institute | Ranked #10 among the best universities in Iran (USNews Ranking) | | | | | | | | | | | | | | | | | | |
| Field of study | Electrical Engineering | | | | | | | | | | | | | | | | | | |
| Title of qualification awarded | Master's Degree | | | | | | | | | | | | | | | | | | |
| GPA | 17.77 out of 20 | | | | | | | | | | | | | | | | | | |
| Title of thesis | Design and analysis of quantum-dot semiconductor optical amplifier based all-optical half adder | | | | | | | | | | | | | | | | | | |
| Supervisor | Prof. Ali Rostami | | | | | | | | | | | | | | | | | | |
| Notable specialized courses | <table><tr><td>Circuits & Electronics I</td><td>20/20</td></tr><tr><td>Circuits & Electronics III</td><td>20/20</td></tr><tr><td>Review and design of electronic systems</td><td>20/20</td></tr><tr><td>Communication Systems</td><td>19/20</td></tr><tr><td>Linear Controls Systems</td><td>19.5/20</td></tr><tr><td>Communication Circuits</td><td>20/20</td></tr><tr><td>Pulse Circuits</td><td>19/20</td></tr><tr><td>Electronics Lab. I</td><td>20/20</td></tr><tr><td>Optimal Sensors Design</td><td>19/20</td></tr></table> | Circuits & Electronics I | 20/20 | Circuits & Electronics III | 20/20 | Review and design of electronic systems | 20/20 | Communication Systems | 19/20 | Linear Controls Systems | 19.5/20 | Communication Circuits | 20/20 | Pulse Circuits | 19/20 | Electronics Lab. I | 20/20 | Optimal Sensors Design | 19/20 |
| Circuits & Electronics I | 20/20 | | | | | | | | | | | | | | | | | | |
| Circuits & Electronics III | 20/20 | | | | | | | | | | | | | | | | | | |
| Review and design of electronic systems | 20/20 | | | | | | | | | | | | | | | | | | |
| Communication Systems | 19/20 | | | | | | | | | | | | | | | | | | |
| Linear Controls Systems | 19.5/20 | | | | | | | | | | | | | | | | | | |
| Communication Circuits | 20/20 | | | | | | | | | | | | | | | | | | |
| Pulse Circuits | 19/20 | | | | | | | | | | | | | | | | | | |
| Electronics Lab. I | 20/20 | | | | | | | | | | | | | | | | | | |
| Optimal Sensors Design | 19/20 | | | | | | | | | | | | | | | | | | |

Research Interests

- Calibration and dimensional metrology
- Lasers and Optical interferometry methods
- Precise measurement tools
- Measurement and uncertainty estimation
- Standardization

- WDM transmitters and modulators
- All optical signal processing and programmable processors
- Photonic integrated circuits (PIC)
- Optical Communications
- Analytical and Numerical Methods
- Microwave Photonics
- Nonlinear optics

Honors, Awards & Grants

2015-2020

- Research Grant for PhD students from the Sahand University of Technology
- Top scorer in Iran's National University Entrance Exam for MSc studies in Electrical Engineering, *Iran*
- Ranked within the top 600 of about 350/000 participants in Iran's National University Entrance Exam for BSc studies, *Iran*
- Full tuition-waiving award for BSc, MSc and PhD programs
- Letter of appreciation for outstanding performance in Iran's National University Entrance Exam for BSc studies from the Mayor of Shabestar City
- Letter of Appreciation for outstanding performance in college-preparatory school from the East Azerbaijan Education Department

2016

- Teaching the Programming language implementation techniques in Workshop on MATLAB Software

Publications

Published Articles

- 1) K. Safari, A. Rostami, G. Rostami, and M. Dolatyari, "All-optical Semiconductor Optical Amplifiers Using Quantum Dots (Optical Pumping)," in *Some Advanced Functionalities of Optical Amplifiers*, ed: InTech, 2015.
- 2) K. S. Anzabi, A. Habibzadeh-Sharif, M. J. Connelly, and A. Rostami, "Wideband Steady-State and Pulse Propagation Modeling of a Reflective Quantum-Dot Semiconductor Optical Amplifier," *Journal of Lightwave Technology*, vol. 38, pp. 797-803, 2019, DOI: 10.1109/JLT.2019.2947648.
- 3) K. Safari-Anzabi, A. Habibzadeh-Sharif, M. J. Connelly, and A. Rostami, "Performance enhancement of an alloptical XOR gate using quantum-dot based reflective semiconductor optical amplifiers in a folded Mach-Zehnder interferometer," *Optics & Laser Technology*, vol. 135, p. 106628, 2020, DOI:10.1016/j.optlastec.2020.106628.

Book Chapter

Standardization

- 4) INSO 3082-2: 2018, Tests for electric cables under fire conditions – Circuit integrity – Part 2: Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to and including 0,6/1,0 kV and with an overall diameter not exceeding 20 mm
- 5) INSO 5505-20-1: 2018, Explosive atmospheres — Part 20-1: Material characteristics for gas and vapour classification — Test methods and data

- 6) INSO 22702: 2017, Dimensions of low-voltage switchgear and controlgear - Standardized mounting on rails for mechanical support of switchgear, controlgear and accessories
- 7) INSO 15447-2: 2017, Wireless power transfer - Management - Part 2: Multiple device control management
- 8) INSO 15448-1-1: 2017, Universal serial bus interfaces for data and power –Part 1-1: Common components–USB Battery Charging Specification
- 9) INSO 21965 : 2016, Acoustics - Estimation of noise-induced hearing loss

Research Achievements

- Development of a novel dynamic model for QDSOA in the reflective interferometry configuration for the first time
- Design of a high-speed and high-performance all-optical processor using interferometry configuration
- Calibration and Standardization methods

Work Experience

Dates

Name of Employer

Position held

Main activities

2015 - Present

Iranian National Standards Organization (INSO)

Expert and Researcher

- ISO/IEC 17025 Auditor Team Leader of testing and calibration laboratories
- Dimensional calibration expert
- Designing and delivering seminars on “Dimensional metrology Calibration of the gauge blocks ”
- Training and educational courses about calibration and measurement instruments such as optical table, opto-mechanical equipment, thermistors, fibers, mirrors, stages, gauge blocks, lasers, CMM, ULM, ...
- Contributing to the development of the national and international standards
- Designing and delivering seminars on “Measurement uncertainty in testing laboratories”
- Attending more than 1000 hours of training and educational courses about testing and calibration laboratories,
- Designing and delivering seminars on “ISO/IEC 17025”

Dates

Name of Employer

Position held

Main activities

2015 - 2020

Sahand University of Technology

Research Assistant

- Teaching MATLAB to the PhD and MSc students
- Designing and delivering seminars on “Optical Interferometry methods for micro- and nano-metrology”
- Designing and delivering seminars on principles of programming
- Teaching about the optics, electromagnetics, and EMC concepts
- Mentoring postgraduate students in developing writing and technical skills
- Reviewing papers for the international journals in the field of optical interferometry and optical processing

| | |
|------------------|---|
| Dates | ➤ Publication in scientific journals 2020 - present |
| Name of Employer | University of Tabriz |
| Position held | Research Assistant |
| Main activities | ➤ Working on a project entitled “Design and Construction of a Nano/Pico Metrology System for Gauge Block Measurements using Optical and X-Ray Interferometry” for use at the National Metrology Center of Iran (NMCI) |

Workshops, Training Courses & Certifications

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|------|--|
| 2022 | ▪ Participation in Workshop on Ensuring the validity of results in laboratory, <i>Iranian National Standards Organization (INSO)</i> |
| 2022 | ▪ Training Course on advanced research methods, <i>INSO</i> |
| 2018 | ▪ Participation in Workshop on Principles of Writing Scientific Texts and Papers, <i>Sahand University of Technology</i> |
| 2017 | ▪ Participation in Workshop on COMSOL Multi-Physics Software, <i>University of Tabriz</i> |
| 2017 | ▪ Participation in Workshop on Photonic and Plasmonic Simulation with COMSOL Multi-Physics Software, <i>Sahand University of Technology</i> |
| | ▪ Participation in Workshop on SILVACO TCAD Software, <i>University of Tabriz</i> |
| 2015 | ▪ Participation in Workshop on LATEX and EndNote, <i>University of Tabriz</i> |
| 2015 | ▪ Participation in Workshop on Principles of Interaction with Local and Foreign Educational Centers, <i>Academic Center for Education, Culture and Research in East Azerbaijan</i> |
| 2015 | ▪ Participation in Workshop on Workplace Safety in Electrical Labs., <i>Sahand University of Technology</i> |
| | ▪ Participation in Workshop on Principles of Technical Inspection of Electrical Lifts, <i>INSO</i> |
| 2017 | ▪ Training Course on Calibration of Equipment in Professional Labs, <i>INSO</i> |
| 2017 | ▪ International Computer Driving License (ICDL), <i>Ryanmehr Ahrar Technical and Educational Center</i> |
| | ▪ Advanced Certificate of Instrumentation, Control skills and Siemens PLC programming for the S7 (NFQ; Level 6), <i>Iran Technical & Vocational Training Organization</i> |
| 2016 | ▪ Training Course on Professional Calibration based on temperature, <i>INSO</i> |
| 2016 | ▪ Training Course on Familiarity with Laboratory Quality Management System according to ISO/IEC17025, <i>INSO</i> |
| 2016 | ▪ Internal Audit according to ISIRI/ISO 9001, <i>INSO</i> |
| 2007 | ▪ Training Course on Fundamental Principles of Writing Scientific Articles, <i>INSO</i> |

Skills

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|-----------------|--|
| Computer Skills | ▪ Programming Language: MATLAB, Silvaco, C++ |
|-----------------|--|

- Engineering software: Orcad, Hspice, Comsol, HFSS
- General Software: LATEX, EndNote, Microsoft Office (Word, Excel and PowerPoint)

Language Skills

- Persian (Native)
- Turkish (Native)
- English (Fluent);
- Arabic (Beginner)

References

Referee 1 Details

Referee's name: Ali Rostami

Position: Professor, Electronic Engineering

Email address: rostami@tabrizu.ac.ir

Organization or Institution: university of Tabriz

Referee 2 Details

Referee's name: Michael Connelly

Position: Associate Professor, Electronic Engineering

Email address: Michael.Connelly@ul.ie

Organization or Institution: University of Limerick

Referee 3 Details

Referee's name: Amir Habibzadeh-Sharif

Position: Associate Professor, Electronic Engineering

Email address: sharif@sut.ac.ir

Organization or Institution: Sahand University of Technology