Curriculum Vitae

Morteza Rezaee

Associate Professor (form 2022)
Department of Electrical Engineering
Hakim Sabzevari University, Sabzevar, Iran.
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Education

Jul. 2017-Aug. 2017 Chalmers University of Technology, Gothenburg, Sweden
Visiting researcher on Gap Waveguide Filters at V band

Sept. 2010-May 2015 Ferdowsi university of Mashhad, Mashhad, Iran.
PhD in Electrical Engineering, Communications, Fields and waves
Thesis: Design and realization of new structures for multimode microwave filters using Substrate Integrated Waveguide (SIW).
Supervisor: Prof. Amir Reza Attari

Apr. 2014-Oct. 2014 Chalmers University of Technology, Gothenburg, Sweden
Visiting researcher on Gap Waveguide filters and diplexer at V band
Supervisors: Prof. Per-Simon Kildal and Dr. Ashraf Uz Zaman

Sept. 2007-Aug. 2009 Urmia university, Urmia, Iran.
MSc. in Electrical Engineering, Communications, Fields and waves
Thesis: Design of a dual band microstrip antenna for wireless communications
Supervisors: Dr. Javad Nourinia and Dr. Changiz Ghobadi.

Sept. 2002-Feb. 2007 Ferdowsi university of Mashhad, Mashhad, Iran.
BSc. in Electrical Engineering, Communications.

Honors and awards

- Iran National Science Foundation (INSF) under Grant on Microwave Pressure sensor, 2020
- Visiting research grant from Chalmers University of Technology, Sweden and ministry of Science, Research, and Technology, Iran 2014
- Visiting research grant from Chalmers University of Technology, Sweden 2017
- Best antenna engineer silver award from antenna group in Chalmers University of Technology, Sweden, 2014.
- Best researcher of electrical engineering group in Ferdowsi University of Mashhad, Iran, 2014.

Research Experience

- Millimeter waves and Terahertz technologies
- Gap waveguide filter and diplexer design and implementation at 60GHz
- Digital Electronics, DSP, PLC, Microcontroller
- Microwave sensors
- Horn antenna array and beam forming network design
- Mobile phone antenna design and implementation
- Microstrip and SIW filters design and implementation
- RF amplifier, fabrication and measurement
- Internet of Things (IoT)
- Cellular network design using ASSET software
- …

Teaching Experience

- **MSc and PhD courses:**
    - **RFIC** (including: Basic concepts, impedance matching, LNA design, Mixer, PA, …, Main reference: RF microelectronic, By: Behzad Razavi)
    - **MMIC** (including: Microstrip lines, RF filters, dividers, couplers, Microwave Amplifiers, Oscillators, Mixers, …, Main Reference: Microwave Engineering, By D. Pozar, and Microstrip Filters for RF/Microwave Applications, By J. Hong)
    - **Microwave Sensors**

- **BSc courses:**
    - RF circuits
    - Electromagnetic Theory
    - Antenna theory and design
    - Microwave engineering
    - Antenna and Microwave lab
    - Communication systems
- **Supervision of MSc students:**
    - Design and simulation of a low noise amplifier in 12-18 GHz band in GaAs Technology, Jan. 2018.
    - Design and simulation of a 32-37 GHz low noise amplifier MMIC in GaAs 0.15μm technology, Sep. 2018.
    - Design and realization of microwave wireless pressure sensor in harsh environment, Jan. 2020
    - Design and simulation of microwave two-dimensional wireless displacement sensor, Jan. 2020

Research Interests

- Millimeter waves and Terahertz technologies
- Active and passive elements based on gap waveguide technology
- Millimeter-wave antennas and arrays
- Active microwave circuits
- Microwave sensors
- Radar systems
- Dual mode and triple mode SIW filters
- Modeling and design of microwave filters using coupling matrix
- Microwave passive devices such as coupler, power divider
- …

Publications

Journal papers:

- **M. Rezaee** and A. U. Zaman, "Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications," in *IEEE Transactions on Microwave Theory and Techniques*, vol. 68, no. 7, pp. 2601-2609, July 2020.

- A.A. Shamabadi, **M. Rezaee**, and A. Kazemi, "Microwave pressure sensor based on transmission response of a quarter-wavelength single stub microstrip line," *Microwave and Optical Technology Letters*, Wiley, pp. 1-5, April 2020..

- **M. Rezaee** and A. Zaman, "Realisation of carved and iris groove gap waveguide filter and E-plane diplexer for V-band radio link application," *Microwaves, Antennas & Propagation, IET*, vol. 11, issue 15, pp. 2109-2115, 2017.

- **M. Rezaee** and A. R. Attari, "A Compact SIW Diplexer Using Dual Mode Resonator as a Junction for SiP Applications," *Electromagnetics, Taylor & Francis*, vol. 37, no. 2, pp. 92-105, Mar. 2017.

- **M. Rezaee** and A. R. Attari, "Analytical synthesis of coupling matrix for a dual mode dual band filter", *Microwave and Optical Technology Letters, Wiley*, vol. 59, issue 1, pp. 80-83, Jan 2017.

- **M. Rezaee** and M.Joodaki, "Two-Dimensional Displacement Sensor Based on CPW Line Loaded by Defected Ground Structure with Two Separated Transmission Zeroes," *Sensors Journal, IEEE*, vol. 17, issue 4, pp. 994-999, Feb. 2017.

- M. Joodaki and **M. Rezaee**, "Coplanar Waveguide (CPW) Loaded With an Electromagnetic Bandgap (EBG) Structure: Modeling and Application to Displacement Sensor," *Sensors Journal, IEEE,* vol. 16, no. 9, pp. 3034-3040, 2016.

- **M. Rezaee** and A. R. Attari, "Fourth order dual mode substrate integrated waveguide filter", *Microwave and Optical Technology Letters, Wiley*, vol. 57, issue 7, pp. 1550-1553, July 2015.

- **M. Rezaee** and Amir Reza Attari, "Dual mode SIW filter using corner cut perturbation", *Journal of Electrical Systems and Signals*, vol. 2, no. 1, pp. 27-32, Oct. 2014.

- **M. Rezaee** and A. R. Attari, "Realization of new single-layer triple mode SIW and dual mode HMSIW filters using a circular shape perturbation", *Microwaves, Antennas & Propagation, IET*, vol. 7, issue 14, pp. 1120-1127, 2013.

- **M. Rezaee**, J. Nourinia, CH. Ghobadi, "Multiband hybrid loop/monopole slot/planar monopole antenna for mobile phone application", *IJICT, issue* 1, pp. 21-27, 2010.

Conference papers:

- B. Halvaei, J. Ghalibafan., **M. Rezaee**, "A Multi-Hole Groove Gap Waveguide Directional Coupler based on Glide-Symmetric Holey EBG for E-Band Application", *Iranian Conference on Electrical Engineering* (*ICEE* 2020), Accepted for publication.

- **M. Rezaee** and A. U. Zaman "Capacitive-Coupled Groove Gap Waveguide Filter", in *European Conference on Antennas and Propagation* (*EuCAP*), 12th, London, UK, April, 2018.

- **M. Rezaee** and Amir Reza Attari "Analytical Calculation of the Resonant Frequencies for a Corner Cut Square SIW Cavity", *Iranian Conference on Electrical Engineering* (*ICEE* 2016), Shiraz University, Shiraz, Iran, 2016.

- **M. Rezaee** and A. U. Zaman, and P.-S. Kildal "V-Band grove gap waveguide diplexer", in *European Conference on Antennas and Propagation* (*EuCAP*), 9th, Lisbon, Portugal, April, 2015.

- **M. Rezaee** and A. U. Zaman, and P.-S. Kildal "A Groove Gap Waveguide Iris Filter for V-Band Application", *Iranian Conference on Electrical Engineering* (*ICEE* 2015), Sharif university, Tehran, Iran, 2015.

- **M. Rezaee** and A. R. Attari, "A novel dual mode dual band SIW filter", in *European Microwave Conference (EuMC),* 44th , pp. 853-856, Rome, Italy, 6-9 Oct. 2014.

- **M. Rezaee** and A. R. Attari, "Design of a novel dual mode filter based on HMSIW structure using mode shifting technique", in *Iranian Conference on Electrical Engineering* (*ICEE* 2013), 21th, Mashhad, Iran, 2013.

- A. Moosaei, H. Neshati, and **M. Rezaee**, "Design of a dual band dual polarized antenna using SIW structure", *ICEE* 2013, Ferdowsi university, Mashhad, Iran, 2013.

- H. Ershad, A. Attari, and **M. Rezaee**, "Design and analysis of a low profile, high selectivity, and wide stopband rejection bandpass microstrip filter," *ICEME* 2012, Science and Technology university, Tehran, Iran (in Persian).

- **M. Rezaee** and A. Attari, "Design of a dual mode filter using Substrate Integrated Waveguide (SIW)", in *Iranian Conference on Electrical Engineering* (*ICEE* 2012), Tehran university, Tehran, Iran, 2012 (in Persian).

- **M. Rezaee**, J. Nourinia, CH. Ghobadi, " Monople microstrip slot antenna for mobile phone applications in bands GSM850/900/DCS/PCS/UMTS/ WLAN2.4 ", *ICEE* 2009, Science and Technology university, Tehran, Iran, 2009 (in Persian).

Skills

- Technical software: HFSS, CST, ADS, MATLAB, ASSET.
- Measurement instruments: Vector Network Analyzer, Spectrum analyzer, Signal generator.

Review Experience

- IEEE Transactions on antennas and propagations (TAP)
- IEEE Microwave and Wireless Components Letters (MWCL)
- IEEE Microwave Theory and Techniques (TMTT)

Important Passed Courses

- Short course in reflector and lens antennas, European school of antennas, Chalmers University of technology, Sweden, 2014.
- PhD: Numerical methods in Electromagnetic, Electromagnetic Compatibility (EMC), Optical Communications, Ferdowsi university of Mashhad, Iran, 2010.
- MSc: Antenna, Microwave, Radar systems, Advanced Electromagnetic, Urmia University, Iran.

References

1- **Amir Reza Attari**, Professor of Electrical Engineering, Ferdowsi University of Mashhad, Mashhad, Iran. Email: attari50@um.ac.ir, Tel.: +98 51 38805057, Website:http://attari50.profcms.um.ac.ir/

2- **Mojtaba Joodaki**, Professor of Electrical Engineering, Ferdowsi University of Mashhad, Mashhad, Iran. Email: joodaki@um.ac.ir, Tel.: +98 51 38805074, Website: http://joodaki.profcms.um.ac.ir/
Interim Professor of Computer Science & Electrical Engineering at Jacobs University Bremen
https://www.jacobs-university.de/directory/joodaki
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3- **Ashraf Uz Zaman**, Associated Prof. of Electrical Engineering, Chalmers University of Technology, Gothenburg, Sweden. Email: zaman@chalmers.se ,Tel: +46 31 772 17 94
Website: https://www.chalmers.se/en/staff/Pages/ashraf-uz-zaman.aspx

Personal Information

- Nationality: Iranian
- Date of Birth: 1984, Iran.
- Marital status: Married, 3 children.
- Interests: swimming, mountaineering