Yong-Kyu Yoon, PhD

Professional Preparation (chronological)

Seoul National University, Seoul, Korea	Electrical Engineering	BS/1992
Seoul National University, Seoul, Korea	Electrical Engineering	MS/1994
New Jersey Inst. of Technology, Newark, NJ	Electrical & Computer Engineering	MS/1999
Georgia Institute of Technology, Atlanta, GA	Electrical & Computer Engineering	PhD/2004
Georgia Institute of Technology, Atlanta, GA	MEMS, RF	PDF/2006

Appointments (reverse chronological)

Associate Professor, Electrical & Computer Engineering, University of Florida	(2010-present)
Assistant Professor, Electrical Engineering, University at Buffalo	(2006-2010)
Postdoc Fellow, Electrical & Computer Engineering, Georgia Institute of Technology	(2004-2006)
Graduate Research Asst., Electrical & Computer Engineering, Georgia Inst. of Technology	(1999-2004)
Staff Engineer for VLSI and MEMS design, New Jersey Microsystems	(1998-1999)
Graduate Research Assistant, Seoul National University	(1992-1994)

Products (Journals, proceedings, invention disclosures, and patents, etc.)

Five most relevant products

1. Seahee Hwangbo, Arian Rahimi, and Yong-Kyu Yoon, "Cu/Co Metaconductor based High Signal Integrity Transmission Lines for Millimeter Wave Applications," *IEEE International Microwave Symposium 2017*, Honolulu, Hawaii, June 4 - 9, 2017 (**Student Paper Competition Award**)
2. Arian Rahimi, Yong-Kyu Yoon, " Study on Cu/Ni Superlattice Conductors for Reduced RF Loss," *IEEE Microwave Wireless Components Letters*, Mar. 2016, 10.1109/LMWC.2016.2537780
3. Arian Rahimi, Jiyu Wu, Xiaoyu Cheng, and Yong-Kyu Yoon, "Cylindrical Radial Superlattice Conductors for Low Loss Microwave Components," Journal of Applied Physics, vol. 117, no. 10, 103911 (7 pages), Mar. 14th, 2015
4. Seahee Hwangbo, Arian Rahimi, Cheolbok Kim, and Yong-Kyu Yoon, "Through Glass Via Disc Loaded Monopole Antennas for Millimeter-Wave Wireless Interposer Communication," *The 65th Electronic Components and Technology Conference 2015*, San Diego, CA, USA, May 26 – May 29, 2015, pp. 999 – 1004
5. Arian Rahimi and Yong-Kyu Yoon, "Integrated Low Loss RF Passive Components on Glass Interposer Technology," *The 65th Electronic Components and Technology Conference 2015*, San Diego, CA, USA, May 26 – May 29, 2015, pp. 308 - 313

Five other significant products

1. Seahee Hwangbo, Aric Shorey, and Yong-Kyu Yoon, "Millimeter-wave Wireless Intra-/Inter chip Communications in 3D Integrated Circuits using Through Glass Via Disk-loaded Antennas," *The 66th Electronic Components and Technology Conference 2016*, Las Vegas, NV, May 31 - Jun. 3, 2016, pp. 2507 - 2512
2. Arian Rahimi and Yong-Kyu Yoon, "Hybrid Cylindrical Radial Superlattice Conductor-based Air-Lifted RF Inductors with Ultra-High Quality Factor for UWB and K-Bands," *IEEE International Microwave Symposium 2016*, 3 pages, San Francisco, CA, May 22 - 27, 2016
3. David Senior, Arian Rahimi, and Yong-Kyu Yoon, "Millimeter-Wave Bandpass Filter on LCP Using CSRR-Loaded Triangular-Shape Quarter-Mode Substrate Integrated Waveguide," *Microwave and Optical Technology Letters*, vol. 57, no. 8, pp. 1782 - 1784, August 2015
4. Jungkwun Kim and Yong-Kyu Yoon; "Fabrication of three-dimensional millimeter-height structures using direct ultraviolet lithography on liquid-state photoresist for simple and fast manufacturing," J. Micro/Nanolithography, MEMS, and MOEMS (JM3), 14(3), 033504, July 2015
5. Cheolbok Kim, Daniel Arenas, David Tanner, and Yong-Kyu Yoon, "Micromachined Air-lifted Pillar Arrays for Terahertz Device," *IEEE Electron Device Letters*, vol. 35, no. 4, pp. 470 - 472, April 2014

Synergistic Activities

1. Broadening participation of underrepresented groups

- Participating in the University Minority Mentor Program (UMMP) of UF as an academic mentor.
- Mentoring several graduate female students.
- Advising a Hispanic PhD student (graduated) and a Hispanic female undergraduate student.
- Mentoring four undergraduate students of the University Scholars Program at UF.

2. International collaboration

- Serving as Chapter President of Korean-American Scientists and Engineers Association (KSEA) Gainesville Florida Chapter (GFC): helping bridge industrial liaison and technology collaboration of the scientists and engineers from the US and Korea.
- Serving as Korean-Technology Advisory Group (K-TAG) of Korea Institute for Advancement of Technology (KIAT) to promote US-Korea technology collaborative efforts.
- Faculty Advisor for UF's Korean Student Association (KSA)
- Hosting exchange students and visiting scholars from France, Germany, Brazil, and Korea.

3. Activities in the profession

- Technical program committee for the 2017 and 2015 International Conference of Solid-State Sensors, Actuators, and Microsystems (Transducers 2017 and 2015) and the 2013 IEEE MTT-S RF and Wireless Technologies for Biomedical and Healthcare Applications, Power MEMS conference 2012, Transducers 2011, Sensors 2011.
- Reviewers for Journal of MEMS, Journal of Micromechanics and Microengineering, Applied Physics Letters, Institute of Physics Nanotechnology, Institute of Physics Smart Materials and Structures, Materials Research, Journal of Nuclear Materials, Journal of Applied Physics etc.
- Editor of Micro and Nano Systems Letters (Springer Inc.).
- NSF panelist and reviewer.

4. Mentoring of graduate/undergraduate students

- **IEEE International Microwave Symposium (IMS) Student Paper Competition Award (2nd Place)** of Seahee Hwangbo, "Cu/Co Metaconductor based High Signal Integrity Transmission Lines for Millimeter Wave Applications," Honolulu, Hawaii, June 4 – 9, 2017
- **IEEE Antennas and Propagation Society (AP-S) Doctoral Research Award of Seahee Hwangbo,** "Millimeter-wave Wireless Interconnects for Intra-/Inter Chip Communications using Through Glass Via (TGV) Disc-loaded Antennas in 3D-IC," Oct. 2016 (Prestigious award given only 10 students in the world each year)
- **IEEE International Microwave Symposium (IMS) Student Paper Competition Finalist** of Arian Rahimi, "Magnetically Tunable Nano-Superlattice Metaconductors for RF Applications," San Francisco, CA, USA, May 22 - 27, 2016
- **IEEE Microwave Theory and Techniques Society (MTT-S) Graduate Fellowship Award:** Arian Rahimi, "Nanotechnology-inspired Multi-layer Conductors for High Performance Microwave Passive Components," March 2016 (Prestigious award given only 12 students in the world each year)
- **Global Youth Innovator Award at 2017 iCAN International CES:** Todd Schumann, Sheng-Po Fang, and Yong-Kyu Yoon, "H3 Mouthguard for Self-Fitness Monitoring and Head, Heat, and Heart-Related Injuries Prevention (Intelligent Mouthguard for Fitness and Sports)," Las Vegas, NV, USA, Jan. 8th, 2017
- **IEEE Antennas and Propagation Society (AP-S) Doctoral Research Award of Arian Rahimi,** " High Performance Conductor Architectures for Future Communication Systems," Oct. 2015 (Prestigious award given only 10 students in the world each year)
- **The Winner of Domestic Contest and a 2nd Place of 2015 International Contest of Applications in Nano-Micro Technology (iCAN'15):** Justin Correll, Tim Ajmani, Troy Templin, and Sheng-Po Fang**,** "Multifunctional Smart Mouthguard for Health Monitoring and Intervention," Anchorage, Alaska, USA, 20-22 June, 2015
- **IEEE International Microwave Symposium (IMS) Student Paper Competition Finalist** of Arian Rahimi, "High-Q K-band Integrated Inductors Using Ni/Cu Nano-Superlattice Conductors," Phoenix, AZ, USA, May 19 - 21, 2015
- **University Scholar Program Award for 2015-2016**, Lisdelys Garcia (Undegratudate), Latin, Female Student, UF, March, 2015
- **IEEE Antennas and Propagation Symposium (APS) Student Paper Competition Award (Honorable Mention)** of Arian Rahimi**,** "High Q-factor Ku Band Inductor using Cylindrical Radial Superlattice Conductor and Air-lifted Architecture," July 2014