

Lukasz M. Szolc
U.S. Permanent Resident

3190 Monitor Avenue, Rm 210.10
Norman, OK 73019
(918) 916-7473
lukasz.m.szolc@ieee.org

RESEARCH INTERESTS

The development and characterization of new radio frequency systems and components via efficient analytical and computational modeling as well as testing of novel radiating and wave guiding structures.

EDUCATION

Doctor of Philosophy, Electrical Engineering
University of Oklahoma, Norman, OK, Expected Summer 2016
Dissertation: "Reconfigurable and integrated slot antennas utilizing resonant loading structures"
Advisor: Dr. Jessica Ruyle

Masters of Science, Radioelectronics and Telecommunication
Silesian University of Technology, Gliwice, Poland, Fall 2011
Thesis: "RFID motor vehicle access control system"
Advisor: Dr. Tomasz Topa

Bachelor of Science, Electronics and Telecommunication
Silesian University of Technology, Gliwice, Poland, Fall 2009

RELEVANT COURSES

- Antennas
- RF & Microwave Filters
- Microwave Systems & Components
- Space-Time-Wireless Communication
- Electromagnetic Compatibility
- Radar Engineering
- EM Fields & Wave Propagation
- Weather Radar Theory/Practice
- Mobile Network Architecture Evaluation
- Printed Circuit Board Design

PUBLICATIONS AND CONFERENCE PRESENTATIONS

- L. M. Szolc and J. E. Ruyle, "A *Transmission Line Model for Simple and Loaded Annular Slot Antennas*," In preparation for submission to IEEE Transactions on Antennas and Propagation.
- L. M. Szolc and J. E. Ruyle, "An *Improved Wideband Transmission Line Model for a Slot Antenna*," In preparation for submission to IEEE Transactions on Antennas and Propagation.
- L. M. Szolc and J. E. Ruyle, "Ring Resonator Loaded Polarization Reconfigurable Annular Slot Antenna (PRASA)," In preparation for submission to IEEE Antennas and Wireless Propagation Letters.
- L. M. Szolc, T. A. Poydence and J. E. Ruyle, "Frequency-Agile Ring Resonator End-Loaded Slot Antenna (ELSA)," Submitted to IEEE Antennas and Wireless Propagation Letters.
- S. F. Bass, L. M. Szolc, and J. E. Ruyle, "Investigation of Beam Steering Capabilities for a Three Element Reconfigurable Loaded Slot Array," in Proc. 2015 Antenna Applications Symposium, Allerton Park, Monticello, IL, Sept. 2015.
- L. M. Szolc and J. E. Ruyle, "Investigation of Feeding Techniques for a Tunable Slot Antenna with a Varactor Loaded Ring Resonator," in Proc. 2015 IEEE/URSI International Symposium on Antennas and Propagation, Vancouver, BC, Canada, July 2015.
- S. F. Bass, B. M. Hennessy, L. M. Szolc, and J. E. Ruyle, "Analysis of Circularly Polarized Annular Slot Antennas to Determine Reconfiguration Mechanism," in Proc. 2014 Antenna Applications Symposium, Allerton Park, Monticello, IL, Sept. 2014.
- L. M. Szolc and J. E. Ruyle, "Mitigation of Radiation from Bias Lines for a Tunable Slot Antenna with a Varactor Loaded Ring Resonator," in Proc. 2014 IEEE/URSI International Symposium on Antennas and Propagation, Memphis, TN, July 2014.
- L. M. Szolc and J. E. Ruyle, "Investigation of parasitic loads in slotline for tunable antennas," in Proc. 2013 IEEE/URSI International Symposium on Antennas and Propagation, Orlando, FL, July 2013.

MAIN SKILLS

- ANSYS HFSS and Designer
- AWR Microwave Office
- FEKO
- MATLAB
- Spectrum and Network Analyzers
- Oscilloscopes and Signal Generators
- Milling, Lithography and Soldering
- Anechoic Chamber Measurements

EXPERIENCE

Graduate Research Assistant 2012 - Present
University of Oklahoma, Advanced Radar Research Center, Norman, OK
Advisor: Dr. Jessica Ruyle

- Researching reconfigurable antennas and other radio frequency components.
- Gaining experience in microwave design, fabrication and measurement.
- Participating in conferences, invited lectures and seminars.
- Composing reports, conference papers and publications.

Graduate Teaching Assistant 2012
University of Oklahoma, Department of Electrical and Computer Engineering, Norman, OK
Professor: Dr. Hjalti Sigmarsson

- Helped conduct the "Electromagnetic Fields I" undergraduate course.
- Gained experience in explaining new concepts to students.

Intern 2010
Netia S.A., Katowice, Poland
Supervisor: Ewa Sagan

- Revised technical documentation for many point to point RF data links.
- Participated in surveillance and development of a large core network.

HONORS AND AWARDS

- University of Oklahoma College of Engineering Hughes Centennial Fellowships
- ERASMUS - Scholarship for Study Abroad at the University of Stuttgart in Germany (2011).
- Automatic Control, Electronics and Computer Science Scholarship for progress in studies (2008/2009).
- Automatic Control, Electronics and Computer Science Scholarship for progress in studies (2006/2007).

PROFESSIONAL SOCIETIES

- Member of the IEEE
- Member of the IEEE Antennas and Propagation Society
- Member of the IEEE Microwave Theory and Techniques Society

COMMUNITY SERVICE AND ACTIVITIES

- Member of the Eta Kappa Nu, Electrical Engineering Honor Society
- Member of the IEEE OU Student Chapter and MTT-S OU Student Chapter
- Student Volunteer at the 2014 IEEE AP-S/URSI International Symposium, Memphis, TN

REFERENCES

- Dr. Jessica Ruyle
Radar Innovations Laboratory, Rm 138
3190 Monitor Avenue
Norman, OK 73019, USA
(405) 325-2967
ruyle@ou.edu
- Dr. Hjalti Sigmarsson
Radar Innovations Laboratory, Rm 154
3190 Monitor Avenue
Norman, OK 73019, USA
(405) 325-2971
h.sigmarsson@ou.edu
- Dr. Caleb Fulton
Radar Innovations Laboratory, Rm 141
3190 Monitor Avenue
Norman, OK 73019, USA
(405) 325-4278
fulton@ou.edu