

Adam Horton

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EDUCATION

University of Oklahoma, Norman, Oklahoma

- Master of Science (M.S.) in Electrical Engineering Aug 2015 – May 2017
 - GPA: 3.88 / 4.00
 - Advisor: Dr. Jessica Ruyle
 - Thesis: Investigation of Low-Power Antenna Reconfiguration through Biasing of Magnetic Loads
- Bachelor of Science (B.S.) in Electrical Engineering Aug 2011 – May 2015
 - GPA: 3.71 / 4.00
 - Advisor: Dr. Jessica Ruyle
 - Thesis: Investigation of Electrical Properties of Clay Soil

EXPERIENCE

Advanced Radar Research Center, University of Oklahoma, Norman, OK

Graduate Research Assistant Aug 2015 – Present

- Currently investigating methods for magnetic reconfiguration of antennas using ferrofluid
 - Magnetic tuning improves electrical isolation between tuning mechanism and RF system
 - Ferrofluid repositioning requires less power than conventional magnetic tuning methods

Ball Aerospace & Technologies Corp, Westminster, Colorado

RF Technical Intern May 2015 – Aug 2015

- Tested and improved components of NASA's Orion Phased Array Antenna

Advanced Radar Research Center, University of Oklahoma, Norman, OK

Undergraduate Research Assistant Jan 2014 – May 2015

- Investigated electromagnetic properties of clay-type Oklahoman soil for tornadic debris analysis

PUBLICATIONS

A. S. Horton, and J. E. Ruyle, "Frequency and Impedance Reconfigurable Stub-Loaded Patch Antenna Using Magnetically-Repositioned Ferrofluid Loads," In progress for submission to *IEEE Transactions on Antennas and Propagation*.

A. S. Horton, S. L. Chilton, H. H. Sigmarsson, and J. E. Ruyle, "Tunable Microstrip Filter Element Using Magnetically-Repositioned Ferrofluid Load," Accepted for publication in the IET's *Electronics Letters*.

A. S. Horton, and J. E. Ruyle, "Investigation of Low-Power Antenna Reconfiguration through Magnetic Polarization Tuning of Ferrite Loads," Presented at *2016 IEEE International Symposium on Antennas and Propagation and URSI/USNC National Radio Science Meeting*, Fajardo, Puerto Rico, June 26 – July 1, 2016.

A. S. Horton, C. J. Fulton, J. E. Ruyle, and K. Hatami "Investigation of Electrical Properties of Clay Soil," Presented at *Proceedings for the 2014 Antenna Applications Symposium*, Allerton Park, Monticello, IL September 23-25, 2014.

SKILLS

Software: HFSS, FEKO, AWR (MWO), ADS, LabVIEW, Multisim, Ultiboard, AutoCAD, MATLAB, C/C++, VBScript, LaTeX

Hardware: Anechoic Chamber Antenna Measurements, Network Analyzer, Spectrum Analyzer, Signal Generator, Photolithography

HONORS

- Recording Secretary for Eta Kappa Nu – Beta Xi Chapter May 2016 – Present
- College of Engineering Dean's Honor Roll May 2012 – May 2016
- National Merit Scholar

VOLUNTEER WORK

- Member of Alpha Phi Omega National Service Fraternity May 2012 – May 2014
 - Taught an Engineering Merit Badge Class to Boy Scouts
 - Completed over 100 Hours of Volunteer Work
- Tutored Elementary Students in Mathematics Aug 2010 – May 2011