**Connor Smith**

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| 3800 SW 34th Avenue, Apt. GG-339 | connor.smith@ufl.edu |
| Gainesville, FL 32608 | (440) 315-7896 |

**Education**

**The University of Florida**

**Doctor of Philosophy in Electrical Engineering** May 2021

* Cumulative GPA: 3.91/4.00
* Graduate School Preeminence Award Fellow (Fall 2017 – Spring 2022)
* Advisor: Dr. David Arnold
* Dissertation: Fabrication and exploration of magnetic nanocomposites for power and radio frequency applications

**The University of Alabama**

**Master of Science in Electrical Engineering** August 2017

* Cumulative GPA: 4.00/4.00
* National Alumni Graduate Fellow (Fall 2016 – Spring 2017)
* University Scholars’ Program (Spring 2016 – Spring 2017)
* Advisor: Dr. Susan Burkett
* Thesis: Method for patterning poly(acrylic acid) sacrificial layers for use in solder-based self-assembly

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| **The University of Alabama** |  |
| **Bachelor of Science in Electrical Engineering** | May 2016 |

* Minor: Mathematics
* Cumulative GPA: 3.81/4.00
* President’s List (Fall 2012 - Fall 2014, Spring 2016)
* Dean’s List (Spring 2015)
* University Honors Program (Fall 2012 – Spring 2016)

**Journal Publications**

**Smith C.S.**, Savliwala S., Mills S.C., Andrew J.S., Rinaldi C., Arnold D.P. (2020) Electro-infiltrated nickel/iron-oxide and permalloy/iron-oxide nanocomposites for integrated power inductors. IEEE J. Magn. Magn. Mater., vol. 493, pp. 165718.

Camilo V., Hwangbo S., Chyczewski S.T., Ewing J., Bowruthu R., **Smith, C.S.**, Yoon Y.K., and Arnold D.P. (2019) Investigation of Ferromagnetic Resonance Shift in Screen-Printed Barium Ferrite/Samarium Cobalt Composites. IEEE Trans. Microwave Theory and Techniques, 67(8), 3230-3236.

**Smith, C.S.**, Feng, Y., and Burkett, S. L. (2017). Method For Patterning Poly(Acrylic Acid) Sacrificial Layers For Use In Solder-Based Self-Assembly.

*Journal of Vacuum Science & Technology B*, 35(3), 03D102.

Feng, Y., **Smith, C.S.**, and Burkett, S. L. (2017). Process for Patterning Features in Poly (Acrylic Acid) for Microelectronic Applications. *Journal of* *Micromechanics and Microengineering*, 27(5), 055007.

**Conference Publications**

Mills S.C., **Smith C.S.**, Arnold D.P., Andrew J.S. (2020) Electrophoretic deposition of iron oxide nanoparticles to achieve thick nickel/iron oxide magnetic nanocomposite films. AIP Advances, vol. 10, pp. 015308.

**Smith C.S.**, Mills S.C., Andrew J.S., Arnold D.P. (2019) Nanoscale structural evaluation of 0-3 magnetic nanocomposites fabricated by electro-infiltration. AIP Advances, vol. 9, pp. 125028.

**Smith, C.S.**, Sondhi, K., Fan Z.H., Nishida T., and Arnold D.P. (2019) Effect of Mechanical Cycling on the Magnetic Properties of Permalloy Films Electroplated on Stretchable Substrates. Proceedings of *IFETC 2019*.

**Research Presentations**

**2020 IEEE 70th Electronic Components and Technology Conference**

Lake Buena Vista, FL; May 2020

* Will present research poster on Electro-infiltrated Nickel/Iron-oxide and Permalloy/Iron-oxide Nanocomposite Films for On-chip Power Converters

**Annual Conference on Magnetism and Magnetic Materials**

Las Vegas, NV; November 2019

* Gave oral presentation on a Screen-Printed Inductive Silver Ink Strain Sensor on Stretchable TPU Substrate

**9th IEEE International Conference on Nanomaterials: Applications & Properties**

Odessa, Ukraine; September 2019

* Gave oral presentation on the Analysis of Electro-Infiltrated Metal/Iron-Oxide Nanocomposites for Micro-Inductors

**IEEE International Flexible Electronics Technology Conference**

Vancouver, BC, Canada; August 2019

* Gave oral presentation on Effect of Mechanical Cycling on the Magnetic Properties of Permalloy Films Electroplated on Stretchable Substrates

**International Conference on Magnetism**

San Francisco, CA; July 2018

* Gave oral presentation on the Exploration of Fe2O3/Cu Nanocomposite Metaconductors Formed by Electro-Infiltration

**American Vacuum Society 64nd International Symposium and Exhibition**

Tampa, FL; October 2017

* Presented research poster on Method for Patterning Crystal Colloidal Masks Embedded in Poly(Acrylic Acid) Sacrificial Layers

**American Vacuum Society 63nd International Symposium and Exhibition**

Nashville, TN; November 2016

* Presented research poster on Applications of Solder-Based Self-Assembly Method for 3D Integration Using Poly(Acrylic Acid)

**Women in STEM Experience (WiSE) Conference**

The University of Alabama; January 2016

* Presented research poster on Applications of Solder-Based Self-Assembly Method for 3D Integration Using Poly(Acrylic Acid)

**American Vacuum Society 62nd International Symposium and Exhibition**

San Jose, CA; October 2015

* Gave oral presentation on Applications of Solder-Based Self-Assembly Method for 3D Integration Using Poly(Acrylic Acid)

**Undergraduate Research and Creative Activity Conference**

The University of Alabama; April 2015

* Presented research poster on Applications of Solder-Based Self-Assembly Method for 3D Integration Using Poly(Acrylic Acid)

**Undergraduate Research and Creative Activity Conference**

The University of Alabama; April 2013

* Presented research poster on Chemical Hydrogen Storage via Molecules of an Unusual Valency

**Teaching Experience**

**Instructor for EEL 5417 – Applied Magnetism and Mag. Materials** Spring 2020

University of Florida, Electrical Engineering Department

* Lectured students on the subject of magnetics and magnetic materials
* Prepared and graded assignments and tests for students
* Number of Students: 30

**Instructor for Workshop on Introduction to Research** Spring 2018

University of Florida, Electrical Engineering Department

* Lectured students on the subject of introductory research methods
* Prepared assignments and tools for students

**Instructor for ECE 380 – Digital Logic** Summer 2017

The University of Alabama, Electrical Engineering Department

* Lectured and instructed students on the subject of digital logic
* Prepared and graded assignments and tests for students
* Monitored and prepared laboratory experiments on digital logic
* Number of Students: 15

**Instructor for ECE 333 – Electronics II** Summer 2016

The University of Alabama, Electrical Engineering Department

* Lectured and instructed students on the subject of analog electronics
* Prepared and graded assignments and tests for students
* Monitored and prepared laboratory experiments on electronics
* Number of Students: 12

**Engineering Tutor** Spring 2016

The University of Alabama, College of Engineering, ENGenuity Lab

* Helped engineering students study and prepare for classes
* Tutored in a variety of subjects including calculus, physics, electromagnetics, circuits, and drafting

**Work and Research Experience**

**Controls Engineering Intern** Summer 2015

Mercedes-Benz U.S. International, Vance, AL

* Aided senior controls engineers in their daily work maintaining and improving the Mercedes-Benz facilities
* Trained on how to program and operate Siemens PLCs via ladder logic

**Undergraduate Research Assistant** Fall 2014 – Fall 2015

The University of Alabama, Electrical Engineering Department, Dr. Susan Burkett

* Worked with post-doctoral researcher on various project involving the plating of carbon nanotubes in through-silicon vias
* Gained experience and training in using cleanroom facilities and various microfabrication processes
* Assisted a team of senior students in completing a design project under Dr. Burkett for their senior thesis

**Installations Engineering Intern** Summer 2014

Constant Aviation, LLC, Cleveland, OH

* Designed and prepared installation documents for parts and systems being installed on private airplanes
* Gained experience in using AutoCAD for electrical drawings and SolidWorks for mechanical drawings

**Laboratory Technician** Spring 2014

Innovative Valency, LLC, Tuscaloosa, AL

* Prepared and ran reactions for the manufacture of chemicals to be sold commercially for research use
* Primarily worked in the creation of organic salts for use in making carbenes

**Undergraduate Research Assistant** Fall 2012 – Fall 2013

The University of Alabama, Chemistry Department, Dr. Anthony Arduengo

* Worked on running various reactions towards the goal of using molecules of an unusual valency to store hydrogen gas as fuel
* Gained experience in running large and small-scale reaction in organic chemistry, as well as how to work in nitrogen environments via dry-boxes

**Leadership Positions and Extracurricular Activities**

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| **Graduate Student Senator** | Spring 2018 |
| University of Florida Student Government |  |
| **Chair** | Spring 2018 – Present |
| IMG Social Media Committee |  |
| **President** | Fall 2016 – Summer 2017 |
| University Amateur Radio Club |  |

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| **Executive Officer** | | |  | | Spring 2016 |
| University Amateur Radio Club | | |  | |  |
| **Vice President** | | | Summer 2015 – Fall 2016 | | |
| American Vacuum Society, UA Student Chapter | | | | |  |
| **President** | | Summer 2015 – Spring 2016 | | | |
| Association of Residential Communities | | |  | |  |
| **Treasurer** | | |  | | Summer 2015 |
| Spark (Student Entrepreneurial Group) | | |  | |  |
| **Electrical Team Lead** | | |  | | Summer 2015 |
| UA MudHut Project (Development of a Large-Scale 3D Printer) | | | | |  |
| **Secretary** | | |  | | Spring 2015 |
| American Vacuum Society (AVS), UA Student Chapter | | | | |  |
| **Treasurer** | | | Fall 2013 – Spring 2015 | | |
| Association of Residential Communities | | |  | |  |
| **Treasurer** | | | Fall 2012 – Fall 2014 | | |
| The College of Engineering Does Amateur Radical Theatre | | | | |  |
| **Honors and Awards** | | |
| • Graduate School Preeminence Award | | | | Fall 2017 – Spring 2022 | |
| • National Alumni Graduate Fellowship | | | | Fall 2016 – Spring 2017 | |
| • Nominee for Engineering Council of Birmingham Award | | | | | Spring 2016 |
| • Nominee for Student Engineer of the Year Award, ASPE | | | | | Spring 2016 |
| • Fred R. Maxwell Jr. Outstanding ECE Junior Award | | | | | Spring 2015 |
| • 2nd, Engineering at Undergrad Research Conference | | | | | Spring 2015 |
| • | Presidential Scholarship | | Fall 2012 – Spring 2016 | | |
| • | Engineering Leadership Scholarship | | Fall 2012 – Spring 2016 | | |

**Skills and Interests**

**Languages:** Fluent in English, Beginner in German, Beginner in Spanish

**Programming:** Can program in C, Python, VHDL, HTML, CSS, and Ladder Logic

**Software:** Proficient at HFSS, AutoCAD, SolidWorks, Eclipse, MatLab, Quartus II,PSpice, PCB Artist, LabVIEW, Microsoft Office, and Adobe

**Lab Skills:** Experienced in using Photolithography, E-beam Evaporation,Electroplating, Plasma Etching, Spin Coating, Furnaces, Schlenk Lines, Dry/Glove Boxes, Vacuum Systems, Optical Microscopes, and Scanning Electron Microscopes (SEM)