

Ashley Gannon | Curriculum Vitae

400 Dirac Science Library – Tallahassee, FL 32306-4120

☎ (561)351-8189 • ✉ ag12s@my.fsu.edu
🌐 people.sc.fsu.edu/~ag12s/

Education

- **Ph.D. Candidate in Scientific Computing | 3.85/4.00** **Tallahassee, FI**
Department of Scientific Computing, Florida State University 2017–2022
Expected July 2022
- **B.S. in Chemical & Biomedical Engineering** **Tallahassee, FI**
Department of Chemical & Biomedical Engineering, Florida State University 2015–2017
- **B.S. in Biological Sciences** **Tallahassee, FI**
Department of Biological Sciences, Florida State University 2012–2015

Employment

General Experience.....

- **Department of Scientific Computing** **Tallahassee, FI**
Technical Support Group Jan. 2018 – Aug. 2018
Worked in a team to monitor and maintain computer systems for the department of Scientific Computing.
- **Florida State University Facility Engineering Services** **Tallahassee, FI**
Utilities Engineering Intern Mar. 2016 – Aug. 2017
Aided in the design and upkeep of mechanical systems in Florida State University's district heating and cooling network and associated hydronic building equipment.
- **Aramark** **Tallahassee, FI**
Supervisor Mar. 2016 – Sep. 2016
Managed concession stands for all D1 sporting events.
- **Honey Lake Plantation Resort and Spa** **Greenville, FI**
Special Event | Restaurant Staff Aug. 2012 June 2013
Set up, worked, and broke down special events such as weddings and business meetings. Worked in the lodge restaurant as a server, hostess, bartender, food runner, and receptionist.
- **Waterway Cafe** **Palm Beach Gardens, FI**
Restaurant Staff May. 2011 Aug. 2012
Worked as a hostess, food runner, and receptionist.

- **Liberty Park Elementary School** **Greenacres, FI**
After School Counselor *Aug. 2010 – May 2012*
 Aided in the implementation of a S.T.E.M. program for after school students where I developed hands-on lesson plans to accompany weekly S.T.E.M. topics, specifically for students aged 5-8 years old. Additionally, I helped students aged 5-10 complete their homework assignments, tutored students who were falling behind on math assignments, and created additional practice problem sets for students who finished their assignments early and wanted more of a challenge. I also developed long activities to do on extended days for the entire after school program including: a live Minute to Win It game show where students in grades k-5 were allowed to compete for prizes, field days, and water days.

Teaching Experience.....

- **Fall 2019 | Graduate Teaching Assistant: Computational Methods for Continuous Problems**
 Developed and graded bi-weekly computer laboratory sessions for upper-level undergraduate students.
- **Spring 2019 | Graduate Teaching Assistant: Numerical PDEs**
 Provided assistance with completing course assignments.
- **Fall 2018 | Graduate Teaching Assistant: Computational Methods for Continuous Problems**
 Developed and graded bi-weekly computer laboratory sessions for upper-level undergraduate students.
- **Fall 2017 | Graduate Teaching Assistant: Introduction to Research Seminar**
 Developed course materials including lectures, in-class activities and assignments.

Research Experience.....

- **Graduate Research Assistant** **Tallahassee, FI**
Florida State University, Office of STEM Teaching Activities *Current*
 Working on the NSF funded project: Research on Computer Science Integrated with Middle School Mathematics. See the Outreach Activities section below for more information.
- **Graduate Research Assistant to Dr. Quaife** **Tallahassee, FI**
Florida State University, Department of Scientific Computing *Current*
 Studying physical quantities, such as adhesion forces and membrane permeability, in vesicle suspensions using computational models. These models are developed using boundary integral equations of Stokes flows.
- **Undergraduate Research Assistant to Dr. McGinnis** **Tallahassee, FI**
Florida State University, Department of Biological Sciences *Jan. 2016 - Aug. 2016*
 Worked with a graduate student studying how epigenetic modifications altered the expression of endogenous and transgenic loci in maize.
 - Helped plant and maintain 30 rows of corn and carried out cross pollination procedures to create the desired phenotypes for experiments.
 - Performed qualitative and quantitative experiments including ChIP Sequencing, PCR genotyping, DNA extraction from plant tissues, nuclei extraction, DNA gel electrophoresis, and formaldehyde crosslinking for chromatin immunoprecipitation.
- **Undergraduate Research Assistant to Dr. Lenhert** **Tallahassee, FI**
Florida State University, Department of Biological Sciences *Jan. 2015 - May 2015*
 Studied how cells orient themselves when adhering to nanowell structures
 - Carried out cell culture experiments, seeding and upkeep
 - Designed and created nanowell polymer molds for experiments
 - Analyzed data using Kodak microscope technology and ImageJ software

- **Undergraduate Research Assistant to Dr. Zhu** **Tallahassee, FL**
Florida State University, Center for Brain Repair *Oct. 2013 - Oct. 2015*
 Helped develop a mouse model for attention deficit hyperactivity disorder (ADHD). Our model demonstrated that hyperactivity and working memory deficits are associated with two specific types of dopamine receptors. Also, exposing the developing brain to nicotine increases the risk of offspring developing ADHD and that this behavior may be transmitted from one generation to the next.
 - Designed and conducted qualitative and quantitative experiments in-vivo and in-vitro including protein binding assays using Sulfur 35, western blots, nuclei extraction, gel electrophoresis.
 - Designed and conducted behavioral model experiments for mice.
 - Extracted and prepared brain tissue for experiments.
 - Analyzed data extracted from experiments.

Industry Experience.....

- **May 2019 | Workshop on Women In Numerical Methods for PDEs and their Applications:**
Banff International Research Station for Mathematical Innovation and Discovery
- **July 2018 | Industrial Math/Stat Modeling (IMSM) Workshop for Graduate Students:**
The Statistical and Applied Mathematical Sciences Institute/Savvy Sherpa
 Working alongside other graduate students and mentors from Savvy Sherpa, we identified an optimal precision treatment regime for patients diagnosed with rheumatoid arthritis by applying a reinforcement learning algorithm, Q-learning, to a large insurance claims dataset.

Publications

Unpublished Works in Development.....

- **Ashley Gannon**, Yuan-Nan Young, Shravan Veeranapanei, Bryan Quaife. *Semi-permeable vesicles: Mathematical formulation, numerics, and physics.*

Presentations

- **2019 SIAM Southeastern Atlantic Section**
 Knoxville, TN
Ashley Gannon, Bryan Quaife *Semi-Permeable Deformable Membranes in a Viscous Fluid*, 2019 SIAM Southeastern Atlantic Section program
- **2019 SIAM Conference on Computational Science and Engineering**
 Spokane, WA
Ashley Gannon, Bryan Quaife *Vesicle Adhesion in Constricted Geometries*, 2019 SIAM CSE conference program
- **2015 Society for Neuroscience Conference**
 Chicago, IL
 FangFang Fan, **Ashley Gannon**, Olivia N. Jackson, Thomas Spencer, Joseph Biederman, Pradeep G. Bhide, Jinmin Zhu, *Prenatal Nicotine Exposure Produces Attention Deficit In Male and Female Mice*, 2015 Neuroscience Meeting Planner

- **2015 Florida State University College of Medicine Undergraduate Research Fair**
Tallahassee, FL
Ashley Gannon, FangFang Fan, Pradeep G. Bhide, Jinmin Zhu, *Prenatal Nicotine Exposure Produces Attention Deficits In Mouse Model*
- **2014 Society for Neuroscience Conference**
Washington, DC
K.P. Lee, N. Pineda, T. Brune, K. Patel, **A. Gannon** , T.J. Spencer, J. Biedeman, P.G. Bhide, J. Zhu, *Hyperactivity and Working Memory Deficits Induced by Prenatal Nicotine Exposure are Associated With Dopamine D1 and D4 Receptor Dysfunction*, Program No. 36.16, 2014 Neuroscience Meeting Planner

Technical Skills

- **Programming Languages:**
 - Python (*Proficient*)
 - Matlab (*Proficient*)
 - Fortran (*Proficient*)
 - C/C++ (*Familiar*)
- **Industry Software Skills:**
 - AutoCAD (*Proficient*)
- **Operating Systems:**
 - Windows
 - Linux

Outreach Activities

- **Founder** **Oct. 2019 - Present**
Create with Code! Summer Camp Program *Tallahassee, FL*

I am currently working with the Department of Scientific Computing and the Office of STEM Teaching Activities to develop the week long summer program, *Create with Code!* to be offered in the summer of 2020. *Create with Code!* is a one-week program for Leon County high-school students who are interested in science and programming. This program will introduce students to Python for data visualization, machine learning, and robotics programming, and Unity for game design. During this week, students will be able to explore FSU's Research Computing Center, the Geophysical Fluid Dynamics Institute, and the Center for Intelligent Systems, Control, and Robotics facility.

- **Volunteer** **Oct. 2018 - Dec. 2019**
Florida State University's Office of STEM Teaching Activities
Research on Computer Science Integrated with Middle School Mathematics *Tallahassee, FL*

This project is a NSF funded collaboration between middle-school mathematics teachers, FSU

computer science (CS) faculty, and STEM education faculty to design, develop, and implement computer science modules into general middle school mathematics courses. Additionally, this project aims to expose a larger, more diverse student body to CS concepts, as current modules mostly supplement advanced math courses. My role in this project has been aiding in the development of the CS modules and supplementary games, and the collection and analysis of data.

- **Volunteer** **February 2, 2019**
Math Fun Day *Tallahassee, FL*

Helped run the computer-algebra room for children ages 4 and above. Aided students in working through a set of programming challenges related to mathematical ideas about polygons in the Scratch programming environment.

- **Judge** **February 1, 2019**
Capital Regional Science and Engineering Fair *Tallahassee, FL*

- **Volunteer and Foster** **May 2015 - Present**
Black Cats and Old Dogs Animal Rescue *Tallahassee, FL*

Black Cats and Old Dogs is a Tallahassee based rescue. Through this organization, I have had the privilege of fostering several kittens and an adult cat. Additionally, I helped promote animals available for adoption, worked adoption events, and set up/worked annual fund-raising dinners.

For References Contact:

- **Dr. Bryan Quaife** **bquaife@fsu.edu**
Current Advisor
- **Dr. Jinmin Zhu** **Jinmin.Zhu@fda.hhs.gov**
Former Advisor
- **Mark Sawicki** **msawicki@admin.fsu.edu**
Former Employer