

JUSTIN M. STINE
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EDUCATION

University of Maryland College Park, College Park, MD May 2018
M.S. in Electrical Engineering
Advisor: Dr. Reza Ghodssi

St. Mary's College of Maryland (SMCM), St. Mary's City, MD May 2014
B.A. in Physics and Mathematics (double major), magna cum laude
Minor in Musical Performance (trumpet)
Thesis: "The Effect of Local Vertical Dissipation Profiles on Absorption Features in Accretion Flows"
Advisor: Dr. Ted Denzen

TEACHING EXPERIENCE

University of Maryland College Park

Graduate Teaching Assistant – Department of Electrical and Computer Engineering 2015-2017

- ENEE307 – Electronic Circuits Design Laboratory (Four semesters - Head TA Fall 2016)
 - Taught two 3 hour weekly lab sessions, assisting students with completion of lab experiments, covering topics of BJT's and audio amplifiers.
 - Responsible for grading pre-lab assignments, lab reports, as well as proctoring and grading exams.

Professors: Dr. Romero (Fall `15), Dr. Newcomb (Spring `16, `17), and Dr. Goldsman (Fall `16)

St. Mary's College of Maryland

Undergraduate Teaching Assistant – Department of Physics 2013-2014

- Fundamentals of Physics III
- Electricity & Magnetism - Led class discussions, graded homework assignments, and held weekly review sessions.

Professor: Dr. Erin DePree

RESEARCH EXPERIENCE

University of Maryland College Park

Graduate Research Assistant – Department of Electrical and Computer Engineering 2017 - present
MEMS Sensors and Actuators Laboratory (MSAL)

PI: Dr. Reza Ghodssi, Director of ISR, Herbert Rabin Distinguished Professor

- Designing an *in situ* sensing solution for bioprocess monitoring in industrial bioreactors.
 - Focusing primarily on device integration and microcontroller programming to create a wireless sensor network for glucose measurements.

St. Mary's College of Maryland

Undergraduate Research Assistant – Department of Physics 2013-2014
Advisor: Dr. Tao, Assistant Professor

- Conducted senior thesis investigating effect of altering power law dependencies of vertical dissipation profiles of stellar mass black holes.
 - The accretion disk structure equations were solved at select annuli, and compiled into a full disk spectra for each dissipation profile.
 - Determined how the discrepancies in energy, resulting from absorption features at specific frequencies of observational data, can be accounted for in theoretical models.

PRESENTATIONS

Stine, J. The Effect of Local Vertical Dissipation Profiles on Absorption Features in Accretion Flows. Poster presentation. St. Mary's Project Day, May 2014, St. Mary's College of Maryland, St. Mary's City, MD.

Stine, J., D. Rice, and C. Winterer. Modeling Traffic Flow with Overtaking. Oral presentation. Mathematical Association of America Sectional Meeting, April 2014, James Madison University, Harrisonburg, VA.

Stine, J. Chaotic Motion of the Double Spring Pendulum. Poster Presentation. Natural Science and Mathematics Student Symposium, April 2013, St. Mary's College of Maryland, St. Mary's College of Maryland, St. Mary's City, MD.

AWARDS

ECE Distinguished Teaching Assistant	2016-2017
ECE TA Training and Development Fellow	2016-2017
2 nd Place Paper Presentation MAA Sectional Meeting	Spring 2014
Omicron Delta Kappa, Leadership and Service Honors Society	Fall 2013 - present
SMCM Physics Peer Mentor (awarded to one PHYS student)	Fall 2012
Sigma Pi Sigma, Physics Honors Society	Fall 2011 - present
SMCM Dean's List	2010 - 2014
SMCM Academic Achievement Scholarship Award Recipient	2010 - 2014

MEMBERSHIPS

Institute of Electrical and Electronics Engineers (IEEE) – Student Member	2015 - present
American Physical Society	2013 - present

REFERENCES

Dr. Reza Ghodssi, ECE Herbert Rabin Distinguished Professor Director of ISR Director of MSAL ghodssi@isr.umd.edu (301) 405-8158	Dr. Ted Denzen, Physics Assistant Professor tdenzen@sandiego.edu (720) 228-5150	Dr. Erin De Pree, Physics Associate Professor ekdepree@smcm.edu (240) 895-2058
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