W. Tyler M^cCleery

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Summary

- Superior analytical, quantitative, and computational skills obtained through 10 years of experience with an advanced degree in physics and subsequent postdoctoral research
- Excellent communication skills honed through research collaborations, teaching, public presentations, and technical writing
- Strong experience in leadership and project management gained by directly planning and supervising research projects, managing budgets, and mentoring students

Education

Ph.D., Physics (Biophysics)	Vanderbilt University, Nashville, TN	2012-2016
M.A., Physics	Vanderbilt University, Nashville, TN	2010-2012
B.S., Physics and Mathematics	Univ. of Southern Mississippi, Hattiesburg, MS	2006-2010

Work Experience

Research Scientist and Lecturer, Vanderbilt University, Nashville, TN

2018-Present

- Programmed mathematical models to analyze and predict biological data and trends in Python and Mathematica
- Implemented Agile management strategies to increase efficiency of 4-person research team, including: Scrum and Kanban, prioritizing, and defining team vision
- Created clear visual representations of data, accurately and concisely describing trends by defining new metrics and determining appropriate statistical tests
- Led 250 students to develop critical thinking and quantitative reasoning skills through interactive, multimedia lectures and small group tutoring sessions
- Studied and honed the art of technical writing to ensure intended messages are clearly received by the reader

Assistant Professor of Physics, University of South Alabama, Mobile, AL

2017-2018

- Clearly communicated technical concepts orally and visually to varied audiences: including 350+ presentations in one year from kindergarten to expert level
- Strong organizational skills, managing over 300 students using online LMS platform and filing systems (received accolades from several regarding organization)
- Maintained international network of collaborators in Canada and United Kingdom
- Met daily deadlines without fail for presentations and reports
- Resourcefully managed team to carry out day-to-day activities for ongoing research: optimizing allocation of materials, personnel, budgets, and schedules

Postdoctoral Scientist, John Innes Centre, Norwich, UK

2015-2017

- Developed technical protocols for microfluidic fabrication and coordinated workshop to teach methods
- Recruited and managed a small (4 person) international research team, acting as the single point of accountability to meet the project deliverables
- Secured funding and managed accounts for £5000 (\$6350) biotech innovation grant
- Tested scientific ideas and assumptions using custom-built computer simulations in Python
- Synthesized details to see the big picture daily bridging gap in understanding between coworkers of different backgrounds (computer science and biology)

Training Experience	Intellectual Property, Patenting, and Licensing Intern, Center for Technology Transfer and Commercialization, Vanderbilt University, Nashville, TN	2019-Present
	Searched and interpreted Prior Art to determine patentability of new technology	
	Prepared Market Opportunity reports for potential licensing partners	
	 Analyzed a wide variety of technologies, understanding technical details through close communication with experts 	
	National Science Foundation Graduate Research Fellow Vanderbilt University, Nashville, TN	2010-2015
	 Demonstrated proficiency in electronics and hardware system communication by building laser microscope and cooling system and Arduino control systems 	
	 Performed quantitative and statistical analysis on hundreds of gigabytes of visual and text-based data sets 	
	 Quickly learned new technical skills – 4 programming languages in 4 years 	
	 Followed multiple research projects from conception to completion, resulting in several publications in high-impact journals and a Ph.D. dissertation 	
Continued Education	Biostatistics for Biomedical Research, Vanderbilt Institute for Clinical and Translational Research, Department of Biostatistics (auditing)	2019
	Project Management Life Cycle, edX and Rochester Institute of Technology (audited)	2019
	Six Sigma and Lean: Quantitative Tools for Quality and Productivity, edX and Technical University of Munich (TUM) (audited)	2019
Skills	Statistical analysis and mathematical modeling	
	• Programming and software:	
	Advanced Experience: Python (including NumPy/SciPy), Git, ImageJ, MS Office,	
	Finite Element Modeling	
	Basic Experience: Linux, Fortran, LabVIEW hardware control, COBOL	
	Scientific visualization through Mathematica, Excel, Inkscape	
	Basic written and oral Spanish	
Publication Highlights	W.T. McCleery , J. Veldhuis, M.E. Bennet, H.E. Lynch, X. Ma, G.W. Brodland, M.E. Lacy, M.S. Hutson. "Elongated cells drive morphogenesis in a surface-wrapped finite element model of germband retraction." <i>Biophysical Journal</i> , 2019.	
	S.M. Crews*, W.T. McCleery *, M.S. Hutson "Pathway to a phenocopy: Heat stress effects in early embryogenesis." <i>Developmental Dynamics</i> , 245: 402-413, 2016. (*equal effort and authorship)	
Affiliations	Member, American Physical Society (APS-Physics) Division of Biological Physics (DBIO)	2013- Present
	Member, British Society of Developmental Biology	2017-2018
Community Leadership	Waterfront Director, Lifeguard, Rap-A-Hope Children's Oncology Summer Camp Scientist in the Classroom, Litton Middle School, Nashville, TN President and Performer, Stage Monkeys Improvisational Comedy Troupe Drum Major (Field Conductor), St. Paul's Marching Band Eagle Scout, Boy Scouts of America, Troop 28	2007-2014 2013-2014 2006-2010 2006 2006