

# W. Tyler McCleery

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<b>Summary</b>	<ul style="list-style-type: none"><li>• Superior analytical, quantitative, and computational skills obtained through an advanced degree in biophysics and subsequent postdoctoral research</li><li>• Strong experience in leadership and project management gained by directly planning and supervising research projects, managing budgets, and mentoring students</li><li>• Excellent communication skills honed through teaching, research collaborations, public presentations, and technical writing</li></ul>		
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<b>Education</b>	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

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<b>Experience</b>	<b>Research Scientist and Lecturer, <i>Vanderbilt University, Nashville, TN</i></b>		<i>2018-Present</i>
	<ul style="list-style-type: none"><li>• Implemented Agile management strategies to increase efficiency of 4-person research team, including Kanban board, prioritizing, and defining team vision</li><li>• Programmed mathematical models to analyze cell and tissue-level mechanics and signaling in Python and Mathematica</li><li>• Created clear visual representations of data, accurately and concisely describing trends by defining new metrics and determining appropriate statistical tests</li><li>• Maintained and operated 3<sup>rd</sup> harmonic, Q-switched Nd:YAG laser ablation and fluorescence microscopy system for biological samples</li><li>• Led 200 students to develop critical thinking and quantitative reasoning skills through interactive, multimedia lectures and small group tutoring sessions</li></ul>		
	<b>Assistant Professor of Physics, <i>University of South Alabama, Mobile, AL</i></b>		<i>2017-2018</i>
	<ul style="list-style-type: none"><li>• Clearly communicated technical concepts orally and visually to varied audiences: including 350+ presentations in one year from kindergarten to expert level</li><li>• Strong organizational skills, managing over 300 students using online LMS platform and paper filing systems (received accolades from several regarding organization)</li><li>• Maintained international network of collaborators in Canada and United Kingdom</li><li>• Met daily deadlines without fail for presentations and reports</li><li>• Resourcefully managed team to carry out day-to-day activities for ongoing research: optimizing allocation of materials, personnel, budgets, and schedules</li></ul>		
	<b>Postdoctoral Scientist, <i>John Innes Centre, Norwich, UK</i></b>		<i>2015-2017</i>
	<ul style="list-style-type: none"><li>• Recruited and managed a small (4 person) international research team, acting as the single point of accountability to meet the project deliverables</li><li>• Secured funding and managed accounts for £5000 (\$6350) biotech innovation grant</li><li>• Developed technical protocols for microfluidic fabrication and coordinated workshop to teach methods</li><li>• Tested scientific ideas and assumptions using custom-built computer simulations in Python</li><li>• Synthesized details to see the big picture – daily bridging gap in understanding between coworkers of different backgrounds (computer science and biology)</li></ul>		

<b>Experience Continued</b>	<b>National Science Foundation Graduate Research Fellow</b> <i>Vanderbilt University, Nashville, TN</i> 2010-2015 <ul style="list-style-type: none"> <li>Performed quantitative and statistical analysis on hundreds of gigabytes of visual and text-based data sets</li> <li>Translated highly technical data into easily understood illustrations, charts, and narrative</li> <li>Quickly learned new technical skills – 4 programming languages in 4 years</li> <li>Followed multiple research projects from conception to completion, resulting in several publications in high-impact journals and a Ph.D. dissertation</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>Statistical analysis and mathematical modeling</li> <li>Programming and software:  <i>Advanced Experience:</i> Python (including NumPy/SciPy), Git, ImageJ, MS Office, Finite Element Modeling  <i>Basic Experience:</i> Linux, Fortran, LabView, COBOL</li> <li>Scientific visualization through Mathematica, Excel, Inkscape</li> <li>Basic written and oral Spanish</li> </ul>
<b>Publication Highlights</b>	<b>W.T. McCleery</b> , 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*, <b>W.T. McCleery</b> *, 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)
<b>Community Leadership</b>	Waterfront Director, Lifeguard, Rap-A-Hope Children’s Oncology Summer Camp 2007-2014 Scientist in the Classroom, Litton Middle School, Nashville, TN 2013-2014 President and Performer, Stage Monkeys Improvisational Comedy Troupe 2006-2010 Eagle Scout, Boy Scouts of America, Troop 28 2006