

John M. Aiken  
Curriculum Vitae

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## EDUCATION

M.S. Department of Physics and Astronomy, Georgia State University [[thesis](#)] 2013  
B.S. Department of Physics and Astronomy, Georgia State University 2010

## RESEARCH INTERESTS

Computers, Learning, Physics Education Research

## PROFESSIONAL APPOINTMENTS

Centre for Computing in Science Education, Department of Physics 2017 - present  
University of Oslo, PhD Candidate  
GFZ-Potsdam German Research Centre for Geosciences, Researcher/Developer 2016 - 2017  
School of Physics, Georgia Institute of Technology, Research Associate I 2013 - 2015  
Department of Physics and Astronomy, Georgia State University, Research Assistant 2010 - 2013

## VISITING APPOINTMENTS

University of Texas at Austin Institute for Geophysics, Visiting Scholar 2016  
Earthquake Research Institute, University of Tokyo, Visiting Scientist 2015  
Department of Physics, University of Colorado Boulder, Software Developer 2015  
Physics Education Research Lab, Michigan State University, Research Associate 2015 - present  
Department of Chemistry, Emory University, Research Assistant 2009

## GRANTS AND AWARDS

Physics Education Research Topical Group Travel Grant (500USD, awarded 2018) 2017  
“Methods for Analyzing Pathways through a Physics Major” selected as Notable Paper in 2016 Physics Education Research Conference Proceedings 2016  
Physics Education Research Topical Group Travel Grant (500USD) 2016  
Physics Education Research Topical Group Travel Grant (450USD) 2015  
Best Graduate Student Poster North Carolina Section of the American Association of Physics Teachers 2013  
Best Graduate Student Poster North Carolina Section of the American Association of Physics Teachers 2011

## PUBLICATIONS

- 13 Solli, Robert, **John M. Aiken**, Rachel Henderson, Marcos D. Caballero. Examining the relationship between student performance and video interactions, 2018 PERC Proceedings, [Accepted]. [[link](#)]

- 12 **Aiken, John M.**, Chastity Aiken, Fabrice Cotton; A Python Library for Teaching Computation to Seismology Students. *Seismological Research Letters*, 89 (3): 1165–1171, (2018). doi: [10.1785/0220170246](https://doi.org/10.1785/0220170246)
- 11 Lin, Shih-Yin, **John M. Aiken**, Daniel T. Seaton, Scott S. Douglas, Edwin F. Greco, Brian D. Thoms, and Michael F. Schatz. Exploring physics students' engagement with online instructional videos in an introductory mechanics course. *Physical Review Physics Education Research* 13, 020138, (2017). [[link](#)]
- 10 Douglas, Scott S., **John M. Aiken**, Shih-Yin Lin, Edwin F. Greco, Emily Alicea-Muñoz, and Michael F. Schatz. Peer assessment of student-produced mechanics lab report videos. *Physical Review Physics Education Research*, 13, 020126 (2017). [[link](#)]
- 9 Douglas, Scott S., **John M. Aiken**, Edwin F. Greco, Michael Schatz, Shih-Yin Lin, Do-It-Yourself Whiteboard-Style Physics Video Lectures. *The Physics Teacher*, 55, 1, (2017). [[link](#)]
- 8 **Aiken, John M.** and Marcos D. Caballero, Methods for analyzing pathways through a physics major, 2016 PERC Proceedings [Sacramento, CA, July 20-21, 2016], edited by D. L. Jones, L. Ding, and A. Traxler, doi:[10.1119/perc.2016.pr.002](https://doi.org/10.1119/perc.2016.pr.002).
- 7 Wilcox, Bethany R., Zwickl, Benjamin M., Hobbs, Robert D., **Aiken, John M.**, Welch, Nathan M. & Lewandowski, H. J. Alternative model for administration and analysis of research-based assessments. *Physical Review Physics Education Research*, 12, 010139 (2016). [[link](#)]
- 6 Douglas, Scott S., Shih-Yin Lin, **John M. Aiken**, Brian D. Thoms, Edwin F. Greco, Marcos D. Caballero, Michael F. Schatz. Peer Evaluation of Video Lab Reports in a Blended Introductory Physics Course, 2014 PERC Proceedings [Minneapolis, MN, July 30-31, 2014], edited by P. V. Engelhardt, A. D. Churukian, and D. L. Jones, doi:[10.1119/perc.2014.pr.015](https://doi.org/10.1119/perc.2014.pr.015).
- 5 Lin, Shih-Yin, Scott S. Douglas, **John M. Aiken**, Chien-Lin Liu, Edwin F. Greco, Brian D. Thoms, Marcos D. Caballero, Michael F. Schatz. Peer Evaluation of Video Lab Reports in an Introductory Physics MOOC, 2014 PERC Proceedings [Minneapolis, MN, July 30-31, 2014], edited by P. V. Engelhardt, A. D. Churukian, and D. L. Jones, doi:[10.1119/perc.2014.pr.037](https://doi.org/10.1119/perc.2014.pr.037).
- 4 **Aiken, John M.**, Shih-Yin Lin, Edwin F. Greco, Brian D. Thoms, Scott S. Douglas, Marcos D. Caballero, Michael F. Schatz. Student Use of a Single Lecture Video in a Flipped Introductory Mechanics Course, 2014 PERC Proceedings [Minneapolis, MN, July 30-31, 2014], edited by P. V. Engelhardt, A. D. Churukian, and D. L. Jones, doi:[10.1119/perc.2014.pr.001](https://doi.org/10.1119/perc.2014.pr.001).
- 3 Caballero, Marcos D., John B. Burk, **John M. Aiken**, Scott S. Douglas, Erin M. Scanlon, Brian D. Thoms, Michael F. Schatz. Integrating Numerical Computation into the Modeling Instruction Curriculum, *The Physics Teacher*, 52, 38 (2014). [[link](#)]
- 2 **Aiken, John M.**, Shih-Yin Lin, Michael F. Schatz, Marcos D. Caballero. The Initial State of Students Taking an Introductory Physics MOOC, 2013 PERC Proceedings [Portland, OR, July 17-18, 2013], edited by P. V. Engelhardt, A. D. Churukian, and D. L. Jones, doi:[10.1119/perc.2013.pr.001](https://doi.org/10.1119/perc.2013.pr.001).
- 1 **Aiken, John M.**, Scott S. Douglas, John B. Burk, Michael F. Schatz, Marcos D. Caballero, Erin M. Scanlon, Brian D. Thoms. Understanding student computational thinking with computational modeling, 2012 PERC Proceedings [Philadelphia, PA, August 1-2, 2012], edited by P. V.

Engelhardt, A. D. Churukian, and N. S. Rebello [AIP Conf. Proc. 1513, 46-49 (2013)],  
doi:[10.1063/1.4789648](https://doi.org/10.1063/1.4789648).

### **INVITED TALKS AND SESSIONS**

Investigating Physics Students Pathways, Georgia State University	2016
What do b-values in the Kumamoto area tell us about the M7 mainshock in April 2016, Georgia Institute of Technology	2016
PyMap: A Python Toolbox for Earthquake Catalogs, ETH-Zurich	2016
Dependence of b-value on Depth, Co-Seismic Slip, and Time for the 2016 Kumamoto Earthquake, University of Texas at Austin Institute of Geophysics	2016
From Physics to Data Science, Texas State University	2016
Student Engagement with Video Course Content in Introductory Mechanics, American Association of Physics Teachers Meeting, Session: PER Using MOOCs	2015
Using the Tools of Online Analytics and Big Data in the On-Campus Classroom, Physics Education Research Conference, Session: Getting Involved in Online PER	2014
What Do We Learn From Students Watching Lecture Videos? University of Colorado Boulder	2014

### **TEACHING EXPERIENCE**

University of Potsdam	2016 - 2017
Georgia Institute of Technology	2012 - 2014
Georgia State University	2008 - 2013

### **SERVICE AND OUTREACH**

Guest Editor, Physical Review Physics Education Research	2017 - 2019
Peer Reviewer, Physical Review Physics Education Research	2017 - present
Peer Reviewer, The Physics Teacher	2017 - present
Research Track Committee Member, EMOOCS 2017 Conference	2017
Committee on Educational Technologies American Assoc. of Physics Teachers	2013 - 2015
Directed short film " <a href="#">What is a Scientific Model?</a> ", shown at <a href="#">AGU Cinema 2016</a>	2013
Georgia Regional Middle School Science Olympiad, Judge	2008 - 2012

### **MEDIA COVERAGE**

Interviewed on 91.1 WREK Inside the Black Box	2016
<a href="#">APS Physics Buzz blog</a> : Your World is Your Lab: More to MOOCs than Seen on Screen	2014
<a href="#">Nature News</a> : Education online: The virtual lab, M. Mitchell Waldrop	2013
<a href="#">Physics Today's Facebook</a> : highlighted findings from Master's thesis	2013

### **PROFESSIONAL ORGANIZATIONS**

Seismological Society of America	2017 - present
Japan Geoscience Union	2017 - present
American Geophysical Union	2016 - present
American Association of Physics Teachers	2010 - present
American Physical Society	2009 - present



## REFERENCES

Marcos D. Caballero, PhD  
Department of Physics  
Michigan State University  
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567 Wilson Rd.  
East Lansing, Michigan 48824-1046  
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