

Michael Wiser

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Interests: Experimental evolution, epistasis, game theory, adaptation, replicability and predictability of evolutionary processes, digital evolution

Education:

Current Postdoc, Evolution Education, BEACON Center for Evolution in Action, MSU
2015 PhD, Zoology Department, Michigan State University, Lab of Dr. Richard Lenski
Program: Ecology, Evolutionary Biology, and Behavior
2006 MS Biological Sciences, Stanford University, Lab of Dr. Brendan Bohannon
2003 BS Biochemistry, University of Southern California, summa cum laude
Lab of Dr. Steven Finkel (Biology)
Minor: History
2003 BS Psychobiology, University of Southern California, summa cum laude
Lab of Dr. Laura Baker (Psychology)

Publications:

Journal Articles:

2016 Taylor, T et al. *Open-ended evolution: perspectives from the OEE workshop in York*. *Artificial Life* 22(3), 408-423
2016 Smith, JJ et al. *An Avida-ED digital evolution curriculum for undergraduate biology*. *Evolution: Education and Outreach* 9(1)
2015 Lenski RE*, MJ Wiser*, et al. *Sustained fitness gains and variability in fitness trajectories in the long-term evolution experiment with Escherichia coli*. *Proc Royal Soc B*.
2015 Wiser MJ and RE Lenski. *A comparison of methods to measure fitness in Escherichia coli*. *PLoS ONE* 10:e0126210
2013 Wiser, MJ, N Ribeck, RE Lenski. *Long-Term Dynamics of Adaptation in Asexual Populations*. *Science*, 342(6164), 1364-1367
2013 Wielgoss, S, et al. *Mutation rate dynamics in an Escherichia coli population reflect tension between adaptation and genetic load* *PNAS* 110(1) 222-227

Peer-Reviewed Conference Proceedings:

2016 Wiser, MJ, LS Mead, JJ Smith, and RT Pennock. *Comparing Human and Automated Evaluation of Open-Ended Student Responses to Question of Evolution*. *ALife XV*
2016 Dolson EM, MJ Wiser, and CA Ofria. *The Effects of Evolution and Spatial Structure on Diversity in Biological Reserves*. *ALife XV*
2016 Canino-Koning R, MJ Wiser, and CA Ofria. *The Evolution of Evolvability: Changing Environments Promote Rapid Adaptation in Digital Organisms*. *ALife XV*

Book Chapters/Articles:

2017 Wiser, MJ and RE Lenski. *Evolutionary Theory and Experiments with Microorganisms*. In *Reference Modules in Life Sciences*. Elsevier, Oxford, UK.
2009 Lenski, RE, and MJ Wiser. *Evolution, theory and experiments with microorganisms*. pp. 550-564 in M. Schaechter, ed. *Encyclopedia of Microbiology*, 3rd edition. Elsevier, Oxford, UK.

Invited Talks:

2015 Rising stars session, BEACON Congress
2015 Seminar speaker, Biology Department, University of Memphis

Teaching Experience:

Fall 2016 Lead instructor, Evolution for Non Life Scientists, Michigan State University (grad)

Fall 2015 Co-Instructor, Evolution for Non Life Scientists, Michigan State University (grad)
 Summer 2011 Instructor, Evolution in Action, Michigan State University (high school)
 Spring 2009 Co-Instructor, Digital Evolution, Michigan State University (grad)
 Spring 2009 Teaching Assistant, Evolution, Michigan State University (undergrad)
 Winter 2005 Teaching Assistant, Microbial Ecology, Stanford University (grad and undergrad)
 Fall 2004 Teaching Assistant Introductory Biology, Stanford University (undergrad)
 Winter 2004 Teaching Assistant, Molecular Evolution, Stanford University (grad and undergrad)
 2002-2003 Supplemental Instructor, University of Southern California (undergrad)
 1 semester of Mechanical Physics for Engineers
 1 semester of Introductory Chemistry
 2 semesters of Honors Introductory Chemistry
 Summer 2002 Teaching Assistant, Upward Bound program, SUNY at Buffalo
 Biology, Chemistry, and Earth Science (high school)

Professional Development:

2009 Certificate in Teaching College Science, Michigan State University

Outreach Activities:

2014, 2016 USA Science and Engineering Festival, Washington DC
 2014 Science Festival, Michigan State University
 2012-16 Marble Elementary Science Outreach, at Marble Elementary, East Lansing
 2013-16 Donley Elementary Science Night, at Donley Elementary, East Lansing
 2012 Marble Elementary Science Outreach, at MSU campus
 2012-14 BEACON Summer High School Institute Inquiry Day, Kellogg Biological Station
 2012-17 Darwin Day, MSU Museum
 2011 Children's Science Day, Potter Park Zoo, Lansing

Grants:

2015 Society for the Study of Evolution, Travel Award
 2014 BEACON grant, Postdoctoral work on Horizontal Gene Transfer in Avida
 2013-15 Department of Zoology, Michigan State University, Travel Award
 2011, 13-15 Graduate School, Michigan State University, Travel Award
 2011, 13-15 College of Natural Science, Michigan State University, Travel Award
 2013-14 Dissertation Completion Fellowship, Michigan State University
 2012-16 BEACON center, Michigan State University, Travel Award
 2011-16 Ecology, Evolutionary Biology, and Behavior, Michigan State University, Travel Award
 2005-6 Center for Evolutionary Studies, Research Grant

Scholarships/Fellowships:

2008 Supplemental Graduate Fellowship, Michigan State University
 2006 University Distinguished Fellowship, Michigan State University
 2003 National Science Foundation Graduate Research Fellowship
 2003 Stanford Graduate Research Fellowship
 2003 Renaissance Scholar, University of Southern California
 2003 Phi Kappa Phi Fellowship, University of Southern California chapter

Academic Awards:

2005 Norman K Wessels Teaching Award,
 Department of Biological Sciences, Stanford University
 2003 Undergraduate Research Symposium, Life Sciences Honorable Mention, Univ. of Southern Cal.
 2002 Undergraduate Research Symposium, Social Sciences First Place, Univ. Southern Cal.