

ROBERT S. SWANSON

Mississippi State University – Department of Physics & Astronomy, Mississippi State, MS, 39762 | 662-325-4017 | rss365@msstate.edu

EDUCATION

The Pennsylvania State University, University Park, PA

M.S. in Meteorology

1997-1999

Research focus: Climate change hydrology

Masters paper: What a Tangled Web – Meteorological Misinformation in the Internet Age

Shippensburg University, Shippensburg, PA

Secondary Education Certification

1994-1995

PA Level I teaching certification in Physics, General Science

University of Scranton, Scranton, PA

B.S. in Physics, B.S. in Philosophy, Math minor

1988-1992

Senior paper topic: "Fermi-level control in semiconductors"

Cum Laude graduate of both the Honors Program and SJLA (Special Jesuit Liberal Arts) Program

AWARDS

2019 class of NITARP (NASA / IPAC Teacher Archive Research Program) – Worked on IDYL (Identification of YSOs in the Lagoon Nebula)

<https://nitarp.ipac.caltech.edu/>

MSVCC (Mississippi Virtual Community College) Instructor of the Year (<https://www.iccms.edu/news/ArticleId/1056/swanson-is-msvcc-instructor-of-the-year?portalid=0>)

2017

Meritorious Achievement Award from Itawamba Community College

(<https://www.facebook.com/ItawambaCommunityCollege/posts/1493687824009191:0>)

2017

Selected as one of the two first educators from Mississippi to fly aboard [NASA's SOFIA \(Stratospheric Observatory for Infrared Astronomy\) aircraft](#)

2016

Graduate of Itawamba Community College Leadership Development Institute

2015

Graduate of UCAR (University Corporation for Atmospheric Research) Heliophysics Summer School

2014

Graduate of AAPT (American Association of Physics Teachers) Two-Year College New Faculty Experience

2012

NISOD Excellence Award

Spring – 2011

Goddard Earth System Science Educators Program (GESSEP)

Summer – 1997

Maryland Earth and Environmental Science Teacher Ambassador Program (MEESTAP)

Summer – 1996

TEACHING EXPERIENCE

Mississippi State University, Starkville, MS

Instructor / Lab Coordinator – Department of Physics & Astronomy

2019 - present

Itawamba Community College, Tupelo, MS

Lead online instructor – Physical Sciences / Geography

2015 - 2019

Responsible for course design of all online physical science courses (Physical Science I & II, Intro to Astronomy, General Chemistry I & II) as well as geography courses (Intro to Meteorology, World Regional Geography). Extensive knowledge of Canvas (LMS) and the integration of third-party applications such as Mastering Physics. Produced original video content and adapted HTML5 simulations for online science courses. Taught traditional and online sections of many of these courses.

Itawamba Community College, Fulton, MS

Instructor – Physical science / astronomy

2009 - 2014

Taught Physical Science I (physics for non-majors), Physical Science II (chemistry for non-majors), Intro to Astronomy both traditionally and online. Advised students and served as president of the ICC Faculty Association.

Shannon High School, Shannon, MS

Science teacher

2009-2010

Taught Physics, Physical Science and Earth Science to students grades 9-12.

Penn State University, University Park, PA

Graduate teaching assistant – Laboratory in Atmospheric Physics

1997

Taught intro-level meteorology lab course. Also served as shift manager for the Campus Weather Service, overseeing the production of the weather page for the campus newspaper as well as radio forecasts prepared for local radio stations.

Bohemia Manor High School, Chesapeake City, MD

Science teacher

1995-1997

Taught Physics, Physical Science, Earth Science and Principles of Technology to students grades 9-12. Coached tennis team, announced football games and served as chair of the high school webpage committee. Through my participation in the MEESTAP and GESSEP summer curriculum programs, I was the first in the school to have a desktop computer in my classroom.

RELATED EXPERIENCE

USA TODAY, McLean, VA

Assistant Weather Editor

2005 – 2009

One primary responsibility was generating the “Weather Focus graphic” found at the bottom of the weather page in the print edition. This required generating a topical idea, researching and writing the text, and working with a graphic artist to produce the final version. In four years at USA TODAY, I produced about 1,000 weather focus graphics as well as hundreds of “Ask the Experts” answers.

WTAJ, KHBS/KHOG, WJHL

Broadcast meteorologist

1999 – 2005

Worked at several television stations as a broadcast meteorologist / weather producer. Duties included forecasting, building graphics (WSI Weather Producer), severe weather coverage (Baron’s FastTrac and VIPIR), and on-air delivery. I also wrote, shot and edited weather-related and astronomy-related stories. As part of station outreach, I developed my “Singing Weatherman” program and spoke to thousands of students at hundreds of schools about weather and science.

PUBLICATIONS AND PAPERS

Right Place, Right Time, Right Size – Engaging Eclipse Activities for Elementary Students

Article in *Celebrating the 2017 Great American Eclipse: Lessons Learned from the Path of Totality*,
Astronomical Society of the Pacific

2019

No, Dog, No! Assessing Moon Phase Misconceptions Using Children’s Literature

Article in *Journal and Review of Astronomical Education and Outreach*, Vol. 1, No. 1 pp. B35-37

2014

[Summer highlights deck danger](#)

Feature story in *USA TODAY*, June 11, 2008

2008

[Weather on the Air: A History of Broadcast Meteorology](#)

Book review in *WeatherWise*, November/December 2010

2010

[Sister inspires beauty contestant as she advocates lightning safety](#)

Feature story in *USA TODAY*, June 15, 2009

2009

[Climate Change: Picturing the Science](#)

Book review in *WeatherWise*, September/October 2009

2009

[Leaks, wasteful toilets cause cascading water loss](#)

Feature story in *USA TODAY*, April 5, 2009

2009

[F5: Devastation, Survival and the Most Violent Tornado Outbreak of the Twentieth Century](#)

Book review in *USA TODAY*, June 20, 2007

2007

[The Donner Party: Weathering the Storm](#)

Book review in *WeatherWise*, July/Aug 2007

2007

PROFESSIONAL PRESENTATIONS

<i>The Sounds of Science</i> Presentation for Fall 2018/Spring 2019 ICC Backyard Astronomy events	2019
<i>The Ringmakers of Saturn</i> Presentation for Spring 2018 ICC Backyard Astronomy event Video -- https://www.youtube.com/watch?v=Cj_413M8HHI	2018
<i>STEM from the Stratosphere: Activities in the Infrared</i> Presentation at NSTA National Meeting in Atlanta, GA	2018
<i>I Can't Believe I Believed That – Facts and Fallacies in Physics and Astronomy</i> Presentation for Fall 2017 ICC Backyard Astronomy event Video -- https://www.youtube.com/watch?v=nLqmwoqgSWA	2017
<i>CSI – Lower Stratosphere</i> Presentation for Spring 2017 ICC Backyard Astronomy event Video -- https://www.youtube.com/watch?v=0WQ_ZiKGqKM	2017
<i>Astronomy in a Different Light</i> Presentation for Fall 2016 ICC Backyard Astronomy event	2016
<u>Using HTML5 Simulations to Teach Conceptual Physical Science</u> Presentation at the 2016 AAPT summer meeting in Sacramento, CA	2016
<u>Wonders of the Winter Night Sky</u> Astronomy program for ICC Backyard Astronomy event Video -- http://www.ustream.tv/recorded/41413370/highlight/443515	2013
<u>Painting the Clouds with Sunshine: A History of Jazz Banjo</u> Presentation at the 2012 AAPT winter meeting in New Orleans, LA Video -- http://www.youtube.com/watch?v=TQHK7CTzMTs Video -- http://www.youtube.com/watch?v=5ziLLCSZ8n4	2013
<u>PowerBalance Bands: Scientific Breakthrough or Snake Oil?</u> Breakout session at 2011 NISOD conference in Austin, TX	2011
<u>The Application of Climate Change Scenarios to the Chesapeake Bay Program's (CBP) Watershed Model</u> Poster presented at AGU (American Geophysical Union) Spring 1999 meeting in Boston, MA	1999
<u>Stormin' Bob Swanson, The Singing Weatherman, presents "Music and Meteorology"</u> A weather program that has been presented to hundreds of school and community groups Video -- http://www.youtube.com/watch?v=4fsYfHCu_Is	2000 - present

LANGUAGES

- English – native language
- Spanish – read, write and speak with basic competence

MEMBERSHIPS

- American Astronomical Society
- Solar System Ambassador -- https://solarsystem1.jpl.nasa.gov/ssa/biography.cfm?US_ID=1794
- National Science Teachers Association
- American Association of Physics Teachers
- Astronomical Society of the Pacific
- Faculty Association – Itawamba Community College
- Diversity Club – Itawamba Community College