

Jennifer A. Meyer, Ph.D.

Instructional Associate Professor
Director of Astronomy Minor
Department of Physics and Astronomy
University of Mississippi

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Education

Ph.D., Planetary Science, Massachusetts Institute of Technology, 2011
Dissertation: Tidal Heating and Tidal Evolution in the Solar System
M.S., Geophysics, Stanford University, 2006
Thesis: The Dynamics and Formation History of the Uranian Satellite System
B.S., Physics, Stanford University, 2006
Honors in Astrophysics, Minor in Mathematics

Employment

University of Mississippi, Department of Physics and Astronomy
Instructional Associate Professor, July 2024 – present
Instructional Assistant Professor, August 2019 – June 2024
Visiting Assistant Professor, August 2018 – June 2019
Clovis Community College, Department of Physics
Instructor (full-time, eligible for tenure), August 2015 – May 2018
Corning Community College, Department of Mathematics
Visiting Lecturer (part-time), August 2012 – May 2015
Staff Tutor (full-time), Math Learning Center, August 2012 – May 2015
University of California Santa Barbara, Department of Physics
Postdoctoral Scholar, June 2011 – July 2012

Teaching Experience

University of Mississippi, Department of Physics and Astronomy
Courses Taught:
PHYS 107: Conceptual Physics I (Fall 2020)
PHYS 108: Conceptual Physics II (Spring 2021)
PHYS 211: Physics for Science and Engineering I (Spring 2019)
PHYS 212: Physics for Science and Engineering II (Fall 2019)
PHYS 213: General Physics I (Falls 2018 – 2023; Springs 2019, 2020, 2022; Summer 2020)
PHYS 214: General Physics II (Springs 2019 – 2025; Summers 2019, 2020)
PHYS 221: Lab Physics for Science and Engineering I (Spring 2019)
PHYS 222: Lab Physics for Science and Engineering II (Fall 2019)
PHYS 223: Laboratory Physics I (Falls 2019 – 2023; Springs 2019 – 2024; Summer 2020)
PHYS 224: Laboratory Physics II (Springs 2019 – 2024; Summers 2019, 2020)
PHYS 503: Selected Topics in Physics I: Stellar Astrophysics (Summer 2022)

ASTR 101: Descriptive Astronomy I (Falls 2019, 2023)
ASTR 103: Intro Astronomy of the Solar System (Fall 2021)
ASTR 204: Astronomy of Stars and Galaxies (Springs 2022, 2024)
ASTR 325: Astrophysics (Springs 2023, 2025)

New Courses Developed:

ASTR 204: Astronomy of Stars and Galaxies (first taught in Spring 2022)
PHYS 503: Selected Topics in Physics I: Stellar Astrophysics (first taught in Summer 2022)
ASTR 3XX / BISC 3XX: Astrobiology (in progress, will be taught in 2024-2025)
ASTR 3XX / CHEM 3XX: Astrochemistry (in progress, will be taught in 2024-2025)
ASTR 3XX / GEOL 3XX: Planetary Geophysics (in progress)

Clovis Community College, Physics

Courses Taught:

PHYS 2A: General Physics I (Falls 2015 – 2017; Springs 2016 – 2018)
PHYS 2B: General Physics II (Falls 2016, 2017; Springs 2016 – 2018)
PHYS 4B: Physics for Scientists and Engineers II (Springs 2016 – 2018)
PHYS 4C: Physics for Scientists and Engineers III (Falls 2016, 2017)
PHYS 10: Conceptual Physics (Fall 2015)
MATH 4B: Precalculus (Summer 2017)

Corning Community College, Mathematics

Courses Taught:

MATH 0960: Prealgebra (Fall 2012)
MATH 0980: Elementary Algebra (Springs 2013, 2014; Summer 2014)
MATH 1215: College Mathematics I (Spring 2015)
MATH 1230: Elements of Applied Math I (Fall 2013)
MATH 1413: Precalculus (Spring 2015)

Teaching Assistantships

Courses Taught:

EAPS 12.472: Building Earth-like Planets, MIT (Spring 2011)
GEOPHYS 150: General Geophysics and Physics of the Earth, Stanford (Winter 2006)
GES 222: Planetary Systems: Dynamics and Origins, Stanford (Fall 2005)
PHYSICS 16: Cosmic Horizons, Stanford (Fall 2004)
UMTYMP: Algebra I, Algebra II, and Trigonometry, UMN (Fall 2001; Spring 2002)

On-Campus Service

University of Mississippi

QEP Advisory Board Member (September 2020 – present)
HPOA Advisory Board Member (March 2022 – present)
Hiring Committee Member for Information Technology Specialist (Spring 2024)
Mississippi Space Grant Consortium Grant Proposal Reviewer (October 2018)

University of Mississippi, Department of Physics and Astronomy

Phys 213–214 Course Coordinator (October 2019 – present)
Director of the Astronomy Minor (March 2020 – present)
Undergraduate Committee Member (March 2021 – present)

Assessment Committee Member (August 2024 – present)
Undergraduate Advisor for approx. 20 physics majors (August 2021 – present)
Hiring Committee Chair for Instructional Assistant Professor (September 2024 – present)
Hiring Committee Member for Chair of Physics and Astronomy (October 2024 – present)
Undergraduate Assessment Coordinator (September 2021 – August 2024)
Hiring Committee Member for Instructional Assistant Professor (September 2023 – March 2024)
Hiring Committee Member for Visiting Assistant Professor (February 2022 – April 2022)
Hiring Committee Chair for Lab Physicist (February 2022 – August 2022)
Hiring Committee Member for HEP Assistant Professor (Spring 2019)
Clovis Community College
Academic Senate
Mentor to two intern instructors (Spring 2016, Spring 2018)
Hiring Committee Chair for Mechatronics (May 2017)

Student Mentorship and Outreach

University of Mississippi
Faculty advisor, Filipino Student Association (May 2024 – present)
Invited panelist for Graduate Women in STEM events (May 15, 2022, February 27, 2024)
SPS Co-advisor (August 2020 – August 2021)
Oxford Science Cafe (September 2018, October 2020)
K-12 Classroom Visits (April 12, 2019 and March 5, 2020)
K-12 Field Trip Host (Feb 27, 2020)
Clovis Community College
Co-advisor of the Science Club
Advisor of two student projects using Raspberry Pi
Advisor of a biweekly physics and astronomy journal club
Organizer of solar eclipse celebration (August 2017)

Conference Attendance (Selected)

AAPT Winter Meeting (January 6-9, 2024)
CUWiP (January 20-22, 2023)
Career Path Panel - What Options Are Out There? (panelist)
Is Grad School right for me/ How to apply to Grad School (panelist)
AAPT Winter Meeting (January 8-12, 2021)
Southern California American Association of Physics Teachers (November 5, 2016)

Professional Development (Selected)

Failing (in order) to Succeed: Fostering Resilience in STEM Classrooms and Research Spaces (November 15, 2024)
STEM Teaching Lunch: Reconsidering Class Time Through Flipped Learning (February 20, 2024)
STEM Teaching Lunch: Student Belonging in STEM (November 10, 2023)

CETL FACT Grant Recipients (Fall 2023)
CETL Faculty Reading Group (Fall 2023)
STEM Teaching Lunch: Supplemental Instruction (panelist September 22, 2023)
Active Learning in Large STEM Courses (March 23, 2023)
QEP FACT Institute (August 10, 2022)
Taking a Scientific Approach to Teaching Science (and Most Other Subjects) (October 21, 2021)
Scientific Teaching in Practice: The Wide World of Inclusive Teaching (December 1, 2020)
How Flipping Classes Can Transition Seamlessly to Remote Classes (July 10, 2020)
From Passion to Action: Levers and Tools for Making Physics Inclusive and Equitable (June 24, 2020)
Allies Training (February 24, 2020)
AAPT New Faculty Workshop (November 14-17, 2019)
Diversifying the Faculty (February 15, 2019)
Workshop on Dynamic Lecturing (January 17, 2019)
Faculty Learning Program, Transforming STEM Teaching (January – May 2018)
Active Learning Workshop (September 2017, October 2017, March 2018)
On Course I Workshop (May 2017)
Accessibility Training (Jan 2017)
Mental Health First Aid (Jan 2016)

Professional Memberships and Service (Selected)

Member, American Association of Physics Teachers, 2016 – present
Member, American Physical Society, 2023 – present
Member, AAS Division for Planetary Science, 2007 – 2014, 2020 – present
Member, AAS Division for Dynamical Astronomy, 2007 – 2014, 2020 – present
Service: NASA Review Panels
Referee for: *Icarus*, *Nature Geoscience*, *Journal of Geodynamics*, *Astronomy and Astrophysics*, *The Physics Teacher*

Research

Experience

Postdoctoral Scholar, Department of Physics, UCSB, June 2011 – July 2012
Graduate Research Assistant, Earth, Atmospheric, & Planetary Sciences, MIT, September 2006 – June 2011
Education Associates Program, NASA Ames Research Center, August 2004 – August 2006
Planetary Geology and Geophysics Undergraduate Research Program, June – August 2004
Department of Physics, Stanford University, September – December 2002
Department of Chemistry, University of Minnesota, May – September 2002

Refereed Papers

7. Wisdom, J. and Meyer, J.A. (2016) Dynamic Elastic Tides, *Celestial Mechanics and Dynamical Astronomy* 126, 1-30.
6. Meyer, J.A., Elkins-Tanton, L., and Wisdom, J. (2011) Corrigendum to “Coupled thermal-orbital evolution of the early Moon” [*Icarus* 208 (2010) 1–10], *Icarus* 212, 448-449.
5. Meyer, J.A. and Wisdom, J. (2011) Precession of the Lunar Core, *Icarus* 211, 921-924.
4. Meyer, J.A., Elkins-Tanton, L., and Wisdom, J. (2010) Coupled Thermal-Orbital Evolution of the Early Moon, *Icarus* 208, 1-10.
3. Meyer, J.A. and Wisdom, J. (2008), Episodic Volcanism on Enceladus: Application of the Ojakangas-Stevenson model, *Icarus* 198, 178-180.
2. Meyer, J.A. and Wisdom, J. (2008) Tidal Evolution of Mimas, Enceladus, and Dione, *Icarus* 193, 213-223.
1. Meyer, J.A. and Wisdom, J. (2007) Tidal Heating in Enceladus, *Icarus* 188, 535-539.

Invited Talks

Spin States of the Moon and Mercury
UCSC CODEP Seminar, June 2012

The Precession of the Lunar Core and Magnetic Implications
Cornell Planetary Lunch Seminar, November 2011

Precession of the Lunar Core
EPSC-DPS, October 2011

Precession of the Lunar Core
Brown-MIT NASA Lunar Science Institute symposium, May 2011

The Lunar Core and a Taste of Tidal Theory
Yale Planetary Seminar, April 2011

The Lunar Core and a Taste of Tidal Theory
ITC Forum at the Harvard-Smithsonian Center for Astrophysics, January 2011

Tidal Heating and Orbital Evolution of Enceladus
Meyer, J. A.; Wisdom, J. European Geophysical Union, May 2010

Coupled Thermal-Orbital Evolution of the Early Moon
Meyer, J. A.; Elkins-Tanton, L.; Wisdom, J. European Geophysical Union, May 2010

Tidal Evolution of Mimas, Enceladus, and Dione
Meyer, J. A.; Wisdom, J. JPL, August 2007

Honors and Awards

Ida Green Fellowship, Massachusetts Institute of Technology, 2006

Presidential Fellowship, Massachusetts Institute of Technology, 2006

Jeff Willick Memorial Award, Stanford Department of Physics, 2006

President’s Scholar, Stanford University, 2002