

Resume/Curriculum Vitae

William Peterson

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EDUCATION

PhD in Physics, May 2011, **University of Iowa**, Iowa City, IA

MS in Physics, November 2009, **University of Iowa**, Iowa City, IA

BS in Astronomy, Mathematics, and Physics, BA in Philosophy, May 2000, **University of Iowa**, Iowa City, IA

TEACHING EXPERIENCE

Professional Faculty Instructor, Department of Physics & Astronomy, **Augustana College**, Rock Island, IL, August 2013-present

- Physics instructor and lab coordinator. Responsible for teaching physics courses (50%-70% of workload depending on need), and designing, maintaining, and updating lab equipment and lab exercises, as well as hiring, training and evaluating student teaching/lab assistants

Adjunct Professor, Department of Physics & Astronomy, **University of Iowa**, Iowa City, IA, August 2011-May 2013

Visiting Professor, Department of Physics, **Grinnell College**, Grinnell, IA, January 2012-May 2012

Graduate Teaching Assistant, Department of Physics & Astronomy, **University of Iowa**, Iowa City, IA, August 2005-May 2011

Adjunct Instructor, **Kirkwood Community College**, Iowa City, IA, August 2003-December 2010

RELEVANT WORK EXPERIENCE

Astronomy Lab Coordinator, Department of Physics & Astronomy, University of Iowa, January 2012-May 2013

Computing Consultant, UIHC Mental Health and Clinical Research Center, Nov 2000-Nov 2002

Physics Lab Supervisor Assistant, Department of Physics & Astronomy, University of Iowa, 1999-2000

Robotic Observatory Operator, Department of Physics & Astronomy, University of Iowa, August 1997-May 2000

CLASSES TAUGHT

Augustana College: Principles of Physics I, II, III (PHYS-101/102/103), Basic Physics I, II, III (PHYS-201/202/203), Principles of Physics I, II (PHYS-151/152), Foundational Physics I, II (PHYS-211/212), Elementary Physics (PHYS-121), Advanced Laboratory II, III (PHYS-361/362), Advanced Numerical Technology (PHYS-366), Advanced Experimental Design (PHYS-367/368), Electronic Circuits (PHYS-308, PHYS-339), Acoustics (PHYS-105), Introduction to Computer Science (CSC-201), laboratory courses for all sections of 100- and 200-level introductory physics

University of Iowa: Stars, Galaxies, and the Universe (029:050), Introductory Physics I (029:081), laboratory courses for College Physics (029:011), Physics I & II (029:021/022), General Astronomy (029:027:028), Stars, Galaxies, and the Universe (029:050)

Grinnell College: General Physics II laboratory (132)

Kirkwood Community College: Survey of Math (MAT-107), Pre-Algebra (MAT-052), Beginning Algebra (MAT-062), Intermediate Algebra (MAT-102), Math in Society (MAT-115)

TECHNICAL SKILLS

Programming Languages: Python, C/C++, FORTRAN, HTML/CSS/PHP
Electronics/PCB fabrication, 3D Printing

PROFESSIONAL SOCIETIES

American Astronomical Society (AAS)
American Association of Physics Teachers (AAPT)
Advanced Laboratory Physics Association (ALPhA)

OUTREACH/COMMUNITY ACTIVITIES

Student Visit/Scholarship Days, ongoing
State Capitol Lobby Days with Iowa Safe Schools, Feb 2023, 2022
Take Back Davenport Campaign, 2021
Augustana Summer Academy, Signals from the Universe, Summer 2016, 2017, 2019
Solar Eclipse Viewing Event, Augustana College, August 2017
Popular Astronomy Club, Guest Speaker, *Radio Halos Of Active Binary Stars*, October 2015
Augustana College John Deere Planetarium/Carl Gamble Observatory public shows 2013-present
Augustana Physics and Engineering Society (APES), 2013-present
Sigma Xi Quad Cities Chapter, Guest Speaker, *Star Signals*, November 2013
Venus Transit Public Viewing, University of Iowa, June 2012
Cedar Amateur Astronomers, Guest Speaker, Palisades-Dows Observatory, *Stellar Radio*, 2012
Campaign To Organize Graduate Students (UE Local 896), steward 2008-2009, president 2009-2010

RESEARCH ACTIVITIES

Active Binary Star Astrometry, Magnetospheric Modeling (2007-)
Student Radio Astronomy Research, Nicholas Misner (2017-2018), Carmella Russell (Summer 2019),
Kristian Mrazek (Summer 2019 – Spring 2021)
MACRO (Macalester-Augustana-Coe Robotic Observatory) Consortium:
student projects, William Murillo (2022-2024) Development of a High Resolution H-Alpha Grism
System, Spectroscopy of Be Stars, Viet Bui (2022-2024) pyScope Software Development
Integrated Field Spectroscopy Development, pyScope Development, Curriculum Development

PUBLICATIONS/CONFERENCE PRESENTATIONS

W. M. Peterson, 2024 June, MACRO Special Session, AAS Meeting #####,
W. M. Peterson, 2015 January, *Modeling Gyrosynchrotron Coronae of Radio-Loud Stars*, **American
Astronomical Society Meeting #225**, Abstract #345.12
W. M. Peterson, R. L. Mutel, J.-F. Lestrade, M. Güdel, W. M. Goss, 2011 April, *Radio Astrometry of
the Triple Systems Algol and UX Arietis*, **The Astrophysical Journal**, Vol. 737, p. 104
R. L. Mutel, W. M. Peterson, M. Güdel, W. M. Goss, 2011 January, *VLBI Astrometric Orbit Solutions
of the Triple Systems Algol and UX Arietis*, **American Astronomical Society Meeting #217**,
Abstract #105.05
W. M. Peterson, R. L. Mutel, M. Güdel, W. M. Goss, 2010 January, *A Large Coronal Loop in the Algol
System*, **Nature**, Vol. 463, p. 207

- W. M. Peterson, R. L. Mutel, 2010 January, *Probing Stellar Coronal Physics with VLBI Imaging*, **American Astronomical Society Meeting #215**, Abstract #419.26
- W. M. Peterson, R. L. Mutel, W. M. Goss, 2009 December, *High-Resolution Radio Images of an Extrasolar Magnetosphere*, **American Astronomical Society Meeting #213**, Abstract #602.03
- W. M. Peterson, R. L. Mutel, 2009 November, *Stellar Coronal Physics with VLBI Imaging*, **American Physical Society, Inaugural Fall Meeting of the Prairie Section of the APS**, Abstract #H2.041
- R.L. Mutel, W. M. Peterson, T. R. Jaeger, J. D. Scudder, 2007 July, *Dependence of Cylotron Maser Instability Growth Rates on Electron Velocity Distributions and Perturbation by Solitary Waves*, **Journal of Geophysical Research**, Vol. 112, p.A7
- R.L. Mutel, W. M. Peterson, T. R. Jaeger, J. D. Scudder, 2006 December, *Dependence of AKR Growth Rate on Electron Velocity Distribution Parameters and Perturbation by Solitary Structures*, **American Geophysical Union Fall Meeting 2006**, San Francisco, abstract #SM53A-1447