Gregory B. Thompson, Ph.D.

Department of Physics, Adrian College
gthompson_at_adrian_dot_edu

EDUCATION

Ph.D. in Physics (Astrophysics Concentration), 2009, University of Toledo
Thesis: *"Time-series Analysis of Line Profile Variability in Optical Spectra of epsilon Orionis"*
Advisor: Dr. Nancy Morrison

M.S. in Physics, 2003, Eastern Michigan University
Thesis: "*Paths in Discrete Spacetime: A Numerical Investigation of the Myrheim Length Conjecture"*
Advisor: Dr. David D. Reid

B.S. in Physics, 1999, University of Michigan – Dearborn

RESEARCH INTERESTS

Astrophysics: time-series analysis of spectroscopic and photometric data; variable stars; line-profile variability in hot stars; sonification of astronomical data

Observatory Experience
Ritter Observatory 1-meter, Toledo, OH, May 2004 – Aug 2008
Logged 117 hours observing time
Recorded 128 échelle and low-dispersion spectra

PROFESSIONAL EXPERIENCE

Adrian College
Professor of Physics, Chair, Dept. of Physics (Sep 2022 – present)
Associate Professor of Physics, Dept. of Physics (Sep 2015 – Sep 2022)
Assistant Professor of Physics, Dept. of Physics (Aug 2009 – Aug 2015)

COURSES TAUGHT

PHYS 201 – General Physics: Mechanics (every year)
PHYS 203 – General Physics: Mechanics Laboratory (every year)
PHYS 202 – General Physics: Thermodynamics & Electromagnetism (every year)
PHYS 204 – General Physics: Therm. & Electro. Laboratory (every year)
PHYS 305 – Tools of Astronomy (every other year)
PHYS 350 – Stellar Astrophysics (every other year)
PHYS 355 – Galaxies & Cosmology (every other year)
PHYS 401 – Classical Mechanics I (every other Fall)
PHYS 403 – Electromagnetic Theory I (every other Spring)
PHYS 420 – Capstone: Experimental Physics (every other Spring)
PHYS 109 – Introductory Astronomy (occasionally)
PHYS 375 – Quantum Theory (occasionally)
PHYS 385 – 20th Century Physics (occasionally)

MENTORED STUDENT RESEARCH

Undergraduate Students (Adrian College "Ribbons of Excellence Projects")
Bautista Galo Rodriguez-Robledo – "Differentiating True Binary Systems from Optical Alignments'' (with Dr. Peter Cha, 2025)
Thomas McGowan – "*Updated Astrometry Observations for WDS 08223-3408*" (2021)
Jamie Brandon – "*Exploration of Causal Set Theory*" (2016)
Nicholas Oderio – "*Wind Variability of the H-alpha Line of epsilon Orionis*" (2015)
Stephanie Boehringer – "*The Synthesis Paths of p-process Nuclei*" (2014)
Brian Diven – "*The Physics of the Hyperloop Concept*" (2014)
Logan Plath, Mitch Stefanski, Stephanie Boehringer, Brian Diven – "*Red Bull™ Stratos: An Extension of Classical Mechanics*" (2013)

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Graduate Students

Daniel Hudson – "*Determination of Force on the Metacarpal Heads of Mixed Martial Artists: Comparison of Hand Protection*" (2017), Master's Thesis Committee Member

Spencer Dennison – "*Effects of Sporting Equipment on Forces at the Punching Hand*" (2016), Master's Thesis Committee Member

Anthony Rossi – "*The Influence of Friction Between Football Helmet and Jersey Materials on Force: A Consideration for Sport Safety*" (2015), Master's Thesis Committee Member

PUBLICATIONS

McGowan, T.Z., Sanford, D., **Thompson, G.B.**, and Garza, M., 2021, "Updating the Separation and Position Angle of WDS 08223-3408", *Journal of Double Star Observations,* **17***,* 254

Rossi, A.M., Claiborne, T.L., **Thompson, G.B.**, and Todaro, S., 2016, "The Influence of Friction Between Football Helmet and Jersey Materials on Force: A Consideration for Safety", *Journal of Athletic Training,* **51**, 701

Thompson, G.B. and Morrison, N.D, 2013, "Variability in Optical Spectra of epsilon Orionis", *The Astronomical Journal,* **145**, 95

Thompson, G.B., 2009, "Time-series Analysis of Line Profile Variability in Optical Spectra of epsilon Orionis", Ph.D. Dissertation, University of Toledo

Ilie, R., **Thompson, G.B.** and Reid, D.D. 2006, "A numerical study of the correspondence between paths in a causal set and geodesics in the continuum", *Classical & Quantum Gravity,* **23**, 3275

Thompson, G.B., 2003, "Paths in Discrete Spacetime: a numerical investigation of the Myrheim length conjecture", M.S. Thesis, Eastern Michigan University

Reid, D.D., Kittell, D.W., Arsznov, E.E. and **Thompson, G.B.**, "The picture of our universe: A view from modern cosmology", 2002, available online at: http://ned.ipac.caltech.edu/level5/Sept02/Reid/frames.html

CONFERENCE PRESENTATIONS

McGowan, T.Z., Sanford, D., **Thompson, G.B.**, and Garza, M., 2021, "The Separation and Position Angle of WDS 08223-3408", InStAR Double Star Seminar (online)

Thompson, G.B. and Morrison, N.D, 2013, "Variability in Optical Spectra of epsilon Orionis", 222nd AAS Meeting, Indianapolis, IN

Thompson, G.B., Kittell, D.W., Morrison, N.D., and Bjorkman, K.S., 2005, "Community Access at Ritter Observatory", 206th AAS Meeting, Minneapolis, MN

CONFERENCES & WORKSHOPS

APS EGLS Fall Meeting, Eastern Michigan University, Ypsilanti, MI, Oct 24-25, 2025
AAS 243 Meeting, New Orleans, LA, Jan 7-11, 2024
NASA's TESS Mission Data Analysis Workshop at AAS, Jan 6, 2024
Institute for Student Astronomical Research (InStAR) Workshop, Feb. 22-May 2, 2021
AAPT Summer Meeting (Virtual), July 18-22, 2020
AAPT Winter Meeting, Orlando, FL, Jan 4-7, 2014
AAS 222 Meeting, Indianapolis, IN, June 2-6, 2013
AAPT Summer Meeting, Philadelphia, PA, July 28-Aug 1, 2012
AAPT Summer Meeting, Portland, OR, July 17-21, 2010

INSTITUTIONAL SERVICE

Chair, Curriculum Committee (Aug 2025 – present)
Chair, Department of Physics (Aug 2009 – Aug 2018, Sep 2022 – present
Moderator, Ribbons of Excellence Conference (April 2010, 2011, 2023)
Physics 2022 Search Committee Chair

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Faculty Liaison, Engineering Dual-Degree Programs (April 2020 – Aug 2023)
IT/Faculty Technology Committee (Sep 2018 – present)
Academic Policy Committee (Sep 2018 – 2025)
Physics 2016 Search Committee Chair
Curriculum Committee (Sep 2012 – Aug 2018)
Math 2012 Search Committee
College Environment Committee (Sep 2010 – Aug 2011)
Presented "Racing with Newton and Bernoulli", Board of Trustees Meeting, Oct 2010
Math 2010 Search Committee
Pre-Engineering Advisor (Aug 2009 – April 2020)

PROFESSIONAL MEMBERSHIPS

American Astronomical Society (AAS)
American Association of Physics Teachers (AAPT)
American Physical Society (APS)

HONOR SOCIETY MEMBERSHIPS

Sigma Pi Sigma (EMU Chapter)
Sigma Xi (UT Chapter)

COMMUNITY SERVICE

CTE Engineering Advisory Board member, Tecumseh Public Schools, Dec 2022 – present
Public Presentation, "Outer Space: Near and Far", Blissfield Public Library, June 20, 2019
Michigan Science Olympiad Regional Tournament, Adrian College, March 29, 2014
- Event Supervisor, Astronomy (Division C)
- Event Supervisor, Helicopters (Division B)