

Tyler D. Scott

Assistant Professor of Physics

*Department of Science and Mathematics
Grace College and Theological Seminary
1 Lancer Way, Winona Lake, IN 46590
☎ (574) 372 5100 ext. 6442
✉ scottt@grace.edu*

Education

- December, 2014 **PhD**, *Clemson University*, Clemson, SC
Engineering and Science Education
- August, 2009 **MS**, *Clemson University*, Clemson, SC
Physics
- May, 2007 **BS**, *Bob Jones University*, Greenville, SC
Physics: *summa cum laude*

Teaching Experience

- 2019-Present **Faith, Science, and Reason**, *Department of Science & Mathematics*, Grace College
Introduction to philosophy of science, the role of Christian thought in the study of science, and how these topics influence apologetics; a required course for all students as part of the Grace College Core
- 2018-Present **University Physics I & II**, *Department of Science & Mathematics*, Grace College
Two semester, calculus-based, introductory physics sequence with laboratory
- 2018-Present **College Physics I & II**, *Department of Science & Mathematics*, Grace College
Two semester, algebra-based, introductory physics sequence with laboratory
- 2018-Present **Physical Science Survey**, *Department of Science & Mathematics*, Grace College
Introduction to physical science primarily for elementary education majors, also taken by BS students to fulfill the Core science requirement
- 2015-2018 **Classical Physics I & II**, *Department of Physics*, Northwestern College
Two semester, calculus-based, introductory physics sequence with laboratory
- 2015-2018 **General Physics I & II**, *Department of Physics*, Northwestern College
Two semester, algebra-based, introductory physics sequence with laboratory
- 2016 **Conceptual Physics**, *Department of Physics*, Northwestern College
Introduction to physical science primarily for elementary education majors
- 2016 **Modern Physics**, *Department of Physics*, Northwestern College
Course for students in the physics minor. Topics include special relativity, quantized energy and momentum, Schrodinger's Equation, nuclear and particle physics, and cosmology.
- 2007-2012 **Physics Laboratory I, II, & III**, *Department of Physics and Astronomy*, Clemson University
Laboratory class for the three semester calculus-based physics sequence
- 2009 **General Physics Laboratory II**, *Department of Physics and Astronomy*, Clemson University
Laboratory class for the second semester of introductory, algebra-based physics

Publications

Tyler D. Scott. A Survey of Science/Theology Paradigms among Students at a College in the Young-Earth or Old-Earth Creationist Tradition. *Perspectives on Science & Christian Faith*, 75(1):29–43, 2023.

Tyler D. Scott and Riley Harder. Exploring All I See: Interdisciplinary Affinity and Goal Orientations of Physics and Engineering Majors. In *Physics Education Research Conference*, Cincinnati, OH, 2017.

Zahra Hazari, Geoff Potvin, Jennifer D. Cribbs, Allison Godwin, Tyler D. Scott, and Leidy Klotz. Interest in STEM is contagious for students in biology, chemistry, and physics classes. *Science Advances*, 3(8), 2017.

Allison Godwin, Tyler D. Scott, Geoff Potvin, Gerhard Sonnert, and Philip M. Sadler. The academic performance index: Creating a more robust and less biased measure of student academic performance. In *Proceedings of the 45th ASEE/IEEE Frontiers in Education Conference*, El Paso, TX, 2015.

Tyler D. Scott, Catherine McGough, and Lisa Benson. Physics students' epistemic framings for a conceptual test question. In *Physics Education Research Conference*, College Park, MD, 2015.

Tyler D. Scott, Zahra Hazari, Geoff Potvin, Philip M Sadler, and Gerhard Sonnert. Interdisciplinary Affinity: Definitions and Connections to Physics Identity. In *Physics Education Research Conference*, Minneapolis, MN, 2014.

Tyler D. Scott, Zahra Hazari, and Geoff Potvin. Interdisciplinary Thinking and Physics Identity. In *Physics Education Research Conference*, Portland, OR, 2013.

G. A. Lehmacher, T. D. Scott, M. F. Larsen, S. G. Bilén, C. L. Croskey, J. D. Mitchell, M. Rapp, F.-J. Lübken, and R. L. Collins. The Turbopause experiment: atmospheric stability and turbulent structure spanning the turbopause altitude. *Annales Geophysicae*, 29(12):2327–2339, December 2011.

Ronald G. Samec, Tyler D. Scott, Jeremy S. Branning, Danny R. Faulkner, Nathan C. Hawkins, and Walter Van Hamme. GSC 1419 0091, an Extreme Mass Ratio Contact Binary. *Information Bulletin on Variable Stars*, (5697), 2006.

Presentations

Peer Reviewed and Invited

- 2015 **T.D. Scott, Z. Hazari, G. Potvin, L. Klotz, P.M. Sadler, G. Sonnert**, *The Development of an Interdisciplinary Affinity Indicator*, Chicago, IL
Poster presented at AERA Annual Meeting, April 18, 2015
- 2014 **T.D. Scott, Z. Hazari, G. Potvin, L. Klotz**, *Connecting Interdisciplinary Thinking and Physics Identity*, Pittsburgh, PA
Paper presented at NARST Annual International Conference, March, 30, 2014

Other Presentations

- 2023 **T. D. Scott**, *Science-Theology Paradigms in a Christian College Student Population*, Winona Lake, IN
Talk given at the Grace College Faculty Forum
- 2022 **T. D. Scott**, *A Chapter per Day: An Account of 7.5 Week Sessions*, Grand Rapids, MI
Talk given at AAPT Summer Meeting, July 13, 2022
- 2017 **T. D. Scott, R. Harder**, *Exploring All I See: Interdisciplinary Affinity and Goal Orientations of Physics and Engineering Majors*, Covington, KY
Poster presented at Physics Education Research Conference, July 26, 2017
- 2017 **T. D. Scott, R. Harder**, *Alike or Unalike: A Comparison of Physics and Engineering Undergraduates*, Covington, KY
Talk given at AAPT Summer Meeting, July 25, 2017
- 2017 **S. Hong, T. D. Scott**, *The Ground on Which We Stand: Christian Education From a Presuppositional Standpoint*, Orange City, IA
Talk given at Northwestern College's annual Day of Learning, February 15, 2017
- 2016 **T. D. Scott**, *God's Role in Nature: Or, How to Avoid Believing in a God of the Gaps*, Orange City, IA
Talk given at a meeting of Northwestern College's Faith and Science club, November 28, 2016
- 2016 **T. D. Scott, J. Muro, Z. Landhuis, T. Tracy**, *Five Views of the Star of Bethlehem*, Orange City, IA
Talk given at Northwestern College's annual Day of Learning, February 10, 2016
- 2015 **T. D. Scott, C. McGough, L. Benson**, *Physics Students' Epistemological Framings for a Conceptual Test Question*, College Park, MD
Poster presented at annual Physics Education Research Conference, July 30, 2015.
- 2015 **T. D. Scott, C. McGough, L. Benson**, *Student Epistemologies and Resource Use in a Conceptual Physics Problem*, College Park, MD
Talk given at AAPT Summer Meeting, July 29, 2015.
- 2014 **T. D. Scott, Z. Hazari, G. Potvin, G. Sonnert, P. Sadler**, *Interdisciplinary Affinity: Definitions and Connections to Physics Identity*, Minneapolis, MN
Poster presented at annual Physics Education Research Conference, July 30, 2014.
- 2014 **T. D. Scott, Z. Hazari, G. Potvin, G. Sonnert, P. Sadler**, *Physics Identity and Defining Interdisciplinary Affinity: Moving Beyond Performance*, Minneapolis, MN
Talk given at AAPT Summer Meeting, July 30, 2014.
- 2014 **T.D. Scott, Z. Hazari, G. Potvin**, *Connecting Interdisciplinary Affinity with Physics Identity and the High School Physics Classroom*, Clemson, SC
Seminar presented to the Clemson University Department of Engineering and Science Education, April 4, 2014.
- 2014 **T.D. Scott**, *Three Minute Thesis*, Clemson, SC
Finalist in Clemson University Graduate School's Three Minute Thesis competition, March 27, 2014.
- 2014 **T.D. Scott, Z. Hazari, G. Potvin**, *"I Got More Interested in it:" Connecting Interdisciplinary Affinity and Physics Identity*, Orlando, FL
Talk given at AAPT Winter meeting, January 6, 2014.

- 2013 **T.D. Scott, Z. Hazari, G. Potvin**, *Interdisciplinary Affinity and Physics Identity*, Portland, OR
Poster presented at annual Physics Education Research Conference, July 17, 2013.
- 2013 **T.D. Scott, Z. Hazari, G. Potvin**, *Interdisciplinary Connections and Physics Identity*, Portland, OR
Talk given at AAPT Summer meeting, July 16, 2013.
- 2010 **T.D. Scott, M.F. Larsen, G. Lehmacher**, *Comparison of Quiet and Disturbed Winds and Turbulent Structures in Sounding Rocket Chemical Releases from Poker Flat Alaska*, San Juan, Argentina
Student presentation at PASI School on Chemistry and Dynamics of the Upper Atmosphere, October 5, 2010.
- 2010 **T.D. Scott**, *Turbopause 2009 Experiment: TMA Trails*, Boulder, CO
Talk given as part of a session entitled *Turbopause: Measurements, Concepts, and Implications* given at CEDAR Annual Workshop, June 25, 2010.
- 2010 **T.D. Scott, M.F. Larsen, G. Lehmacher**, *The Turbopause Experiment: Observations of Turbulence Structure in Sounding Rocket Chemical Tracer Trails Associated with High-Shear Regions*, Boulder, CO
Poster presented at CEDAR Annual Workshop, June 22, 2010.
- 2009 **T.D. Scott, M.F. Larsen, J.D. Craven**, *Rocket Observations of Lower Thermospheric Winds at High Latitudes During Active Conditions*, Santa Fe, NM
Poster presented at CEDAR Annual Workshop, June 29, 2009.
- 2006 **W.V. Van Hamme, R.G. Samec, T. Scott, I.B. Rook, J. Branning, D.R. Faulkner, N.C. Hawkins**, *Photometric Studies of Interacting Binaries: V965 Cyg and VV CVn*, Calgary, Alberta
Poster presented at the 208th meeting of the American Astronomical Society, June 7, 2006.
- 2006 **T. Scott, R. Samec**, *GSC 1419 0091, A Low Amplitude, Totally Eclipsing Contact Binary*, Greenville, SC
Talk given at the 5th Annual Meeting of Astronomers in South Carolina, April, 2006.
- 2006 **R.G. Samec, S.M. Jones, T. Scott, J. Branning, J. Miller, D.R. Faulkner, N.C. Hawkins**, *Preliminary Studies of Interacting Binaries From NURO Observations: V963 Cygni and GSC 1419 0091*, Washington D.C.
Poster presented at the 107th meeting of the American Astronomical Society, January 9, 2006.

Book Reviews

Astrophysics and Creation: Perceiving the Universe through Science and Participation, by Arnold Benz, *Perspectives on Science and Christian Faith*, 70(3), September 2018: 206-208

Membership and Service

External

- 2016–Present **Reviewer**, Physical Review Special Topics - Physics Education Research
- 2013–Present **Member**, American Association of Physics Teachers
- 2013–2017 **Reviewer**, Physics Education Research Conference

Institutional

- 2019–Present **Member**, Grace College IRB Committee
- 2019–Present **Coordinator**, Physical Sciences, Grace College
- 2019–Present **Coordinator**, Science Core Program, Grace College
- 2019–Present **Coach**, Grace College Rugby Club
- 2021–2023 **Member**, Grace College Work/Life Balance Committee
- 2016–2018 **Member**, Northwestern College Core Committee
- 2016–2018 **Coach**, Northwestern College Rugby Club

Grants and Awards

- 2017 Northwestern College Scholarship Grant
- 2014 Clemson University Graduate Student Government Professional Enrichment Grant
- 2007 Clemson University Graduate Dean's Fellowship