CHRISTY (ZUIDEMA) METZGER

University of Delaware, School of Education Email: cmetzger@udel.edu

EDUCATION

UNIVERSITY OF DELAWARE — NEWARK, DE
Doctoral Student, PhD in Education — **2021-present**
Final GPA: 4.00/4.00
Specialization: Learning Sciences

TOWSON UNIVERSITY — TOWSON, MD
Masters of Arts in Teaching, Secondary Science — **May 2007**
Final GPA: 4.00/4.00
Certification in Secondary Physics

GETTYSBURG COLLEGE — GETTYSBURG, PA
Bachelor of Arts, Major in Physics and Minor in Mathematics — **May 2006**
Final GPA: 3.89/4.00. 3.72 GPA in Physics. Summa Cum Laude.
Physics Departmental Honors.
Senior Thesis Research with Dr. Sharon Stephenson on modeling the direct measurement of n-n scattering using the YAGUAR pulsed reactor

RESEARCH EXPERIENCE

Research Assistant — **FALL 2023-present**
University of Delaware Center for Teaching, and Assessment of Learning — Advisor: Rose Muravchick
Role: *Assist in collecting and analyzing data for the Foundational Course Initiative*

Research Assistant — **SUMMER 2023, 2024**
University of Delaware School of Education — Advisor: Zoubeida Dagher
Project Title: *Elementary Pre-Service Teachers' Proposed Interventions to Support Student Engagement in an Equity-Oriented Simulation*

Research Assistant — **SUMMER 2022-SPRING 2023**
University of Delaware School of Education — Advisor: Danielle Ford
Project Title: *The World in a River Project*

Research Assistant — **FALL 2021-SPRING 2022**
University of Delaware School of Education — Advisor: Dr. Lynsey Gibbons
Project Title: *Understanding How Elementary Teachers Take Up Discussion Practices to Promote Disciplinary Learning and Equity.*

Undergraduate Senior Thesis — **FALL 2005-SPRING 2006**

Title: *Modeling the direct measurement of n-n scattering using the YAGUAR pulsed reactor* Advisor: Dr. Sharon Stephenson

TEACHING EXPERIENCE

TOWSON UNIVERSITY TOWSON, MD
Adjunct Faculty **Winter 2014-Summer 2021**

- Instructor for introductory physics courses and labs.
- Courses Taught: Physics 211: General Physics I: Non-Calculus based course and laboratory, General Physics II: Non-Calculus based course and laboratory. Physics 202 General Physics for the Health Sciences laboratory.

JOHNS HOPKINS CENTER FOR TALENTED YOUTH CTYONLINE
Physics Teacher **Summer 2012-Winter 2020**

- Online instructor for Honors Physics and AP Physics 1. Taught students from around the world AP physics and Honors Physics online.
- Collaborated on the redesign of the Honors Physics curriculum.
- Contributed to the development of labs for the AP Physics 1 curriculum.
- Collaborated with other instructors to modify and develop materials for AP Physics 1 course as needed.

WINTERS MILL HIGH SCHOOL WESTMINSTER, MD
Physics Teacher **2008-2012**

- Head of the Physics Department. Teaching 9th grade Conceptual Physics (Honors and Academic levels) and AP Physics B.
- Developed and modified curriculum to teach Conceptual Physics. Physics First model with Active Physics and Conceptual Physics texts used. Modified and developed curriculum and labs as needed and shared with other physics instructors around the county.
- Participant in Collaborative Coaching at Winters Mill High School (Fall 2010-2012). Met with other teachers from different disciplines, observing each other's classrooms and then meeting to discuss best practices.
- Selected Participant in the Carroll County STEM PLC (Fall 2010-2011).

WESTMINSTER HIGH SCHOOL WESTMINSTER, MD
Physics Teacher **2007-2008**

- Taught 9th grade Conceptual Physics (Honors and Academic levels) and 12th grade Physics.
- Developed and used individual curriculum for the 12th grade physics course.

HONORS AND RECOGNITION

UNIVERSITY OF DELAWARE

Graduate Paper Award, Second Place [$700] April 2024

- Awarded for my submission of "Examining Physics Professors' Perceptions of Ideal Students Through the Lens of Power and Identity" at the Steele Symposium held by the College of Education and Human Development at the University of Delaware

Graduate Student Travel Award [$3000] Spring 2023-2024

- Funded to travel to the National Association for Research in Science Teaching in Spring 2023 and the American Education Research Association in Spring 2024

Phi Kappa Phi

GETTYSBURG COLLEGE

- Phi Kappa Phi
- Knowles Teaching Fellow, 2006 Cohort. A five-year fellowship for teachers providing professional support, collaboration, and professional development activities. Selection based on content knowledge, commitment to teaching and leadership.
- Presidential Scholar at Gettysburg College.
- Phi Beta Kappa
- Julius Eno Physics Prize, highest G.P.A in Physics for sophomore students
- Miller-Mara First Year Student Prize in Physics, highest G.P.A. in Physics for First Year students.
- Gettysburg College Award in Athletics 2003, 2004, and 2005, highest G.P.A. for female athletes at Gettysburg College.
- Dean's List, Dean's Commendation List.
- Alpha Lambda Delta- first year student Honor Society
- Omicron Delta Kappa Society
- Sigma Pi Sigma- Physics Honor Society

PUBLICATIONS

Dagher, Z. & **Metzger, C.** (in press) Exploring Preservice Teachers' Engagement in a Digital Clinical Simulation for Inclusive Science Education. *Contemporary Issues in Technology and Teacher Education-Science.*

MANUSCRIPTS IN PROGRESS

Metzger, C. & Ford, D. (under review). Physics Professors' Orientations to Teaching and Adoption of Research-Based Instructional Strategies.

Metzger, C. (in preparation). Examining Physics Professors' Perceptions of Ideal Students Through the Lens of Power and Identity.

CONFERENCE POSTERS AND PRESENTATIONS

Metzger, C. (2024, April 11-14). Examining Physics Professors' Perceptions of Ideal Students Through the Lens of Power and Identity [roundtable]. American Educational Research Association, Philadelphia, PA

Dagher, Z. & **Metzger, C.** (2024, April 11-14). Analysis of Elementary Pre-Service Teachers' Proposed Interventions to Support Student Engagement in an Equity-Oriented Simulation [roundtable]. American Educational Research Association, Philadelphia, PA

Metzger, C. (2024, March 17-20). Physics Professors' Pedagogical Decisions and Adoption of Research-Based Instructional Strategies [paper presentation]. Annual International conference of the National Association for Research in Science Teaching, Denver, CO.

Dagher, Z. & **Metzger, C.** (2024, March 17-20). Elementary teacher candidates' reflection on their roles as educators after engaging in a digital simulation [paper presentation]. Annual International conference of the National Association for Research in Science Teaching, Denver, CO.

Metzger, C. (2023, April 28). Physics Professors' Pedagogical Choices and Expectations for Students as Learners [poster session]. Steele Research Symposium, Newark, Delaware.

Ford, D., **Metzger, C.** (2023, April 18-21). College student conceptions of experimental design and argumentation in the earth sciences [paper presentation]. Annual International conference of the National Association for Research in Science Teaching, Chicago, IL.

Pinilla, R. K., **Metzger, C**., Wilhelm, A. G., & Prough, S. (2023, February 2-4). Assessing teacher noticing to design for future learning and understanding change [discussion session]. Twenty-Seventh Annual Conference of the Association of Mathematics Teacher Educators, New Orleans, LA.

Gibbons, L., Marianno, L., **Metzger, C.,** Prough, S., Webster, A. (2022). Responding to Elementary teachers' learning needs: partnering to support student talk in classrooms [poster session]. Provost Symposium Poster Session, Newark, Delaware.

Rulli, C. & **Metzger, C**. (2010). Using portfolios to promote reflective practice in new teachers [presentation]. National Science Teaching Association Spring Conference, Philadelphia, PA.

Mossgrove, J., Rostock, R., Rulli, C. & **Metzger, C.** (2009). A modified approach to lesson study for secondary mathematics and science teachers [presentation]. Chicago Lesson Study Conference, Chicago, IL.

Metzger, C. & Shirey, K (2010). Managing Differentiation [presentation]. Knowles Teacher Initiative Summer Conference.

Rulli, C. & **Metzger, C.** (2009). Chicago Lesson Study Group Annual Conference [poster session]. Knowles Teacher Initiative Summer Conference Poster Session.

Gipson-Nahman, J. & **Metzger, C**. (2007). Smithsonian Energy and Motion Workshop [poster session]. Knowles Teacher Initiative Summer Conference Poster Session.

SERVICE TO THE PROFESSION

Reviewer for The Science Teacher, Summer 2024-Present

NARST Graduate Student Committee Member, Fall 2024-Present

Organizational Planning Committee of the Chesapeake Section of American Association of Physics Teachers (CSAAPT) Meetings, Fall 2023-Present

Panelist, "Academia and Educational Research," Knowles Teacher Initiative Roundtable, November 2024

Organizational Committee of the Learning Sciences Brown Bag Meetings, Fall 2023- Spring 2024

Panelist, "Building Your Toolbox for Teaching in Graduate School," College of Education and Human Development, University of Delaware, October 2023

TEACHING PROFESSIONAL DEVELOPMENT

- Developed a lesson study on Sound as Wave Phenomenon with 2 other physics teachers from 2007-2011. Taught, reflected, and rewrote lesson based on assessments and data.
- Developing Teacher-Led PLCs, the Teacher Leader with Steve DeAngelis (Fall 2010 and Spring 2011)
- Shady Side Academy on Modeling in Freshmen Physics (Summer 2010)
- Differentiated Instruction Workshop with Amy Germundson of UVA (Fall 2009 and Spring 2010)
- Formative Assessment workshop at the University of Maryland, College Park with Janet Coffey and Dan Levin (October 2008 and March 2009)
- AP Physics B workshop at the University of Texas, Dallas (August 2008)
- POGIL (Process Oriented Guided Inquiry Learning) workshop with Rick Moog at Franklin and Marshall College (April 2008)
- Modeling curriculum workshop at Arizona State University (October 2007)
- Nature of Science workshop with Randy Bell at the University of Virginia (April 2007)
- Physics by Inquiry workshop with the Physics Education Group at the University of Washington (October 2006)

ADDITIONAL EXPERIENCE

Spring 2008 **Westminster High School, Westminster, MD**

Head Coach (focused on jumpers) for the Westminster High School Outdoor Track team. Develop and run practices for the triple jumpers, long jumpers, pole vaulters, and high jumpers on the track team.

August 2003- May 2006 **Gettysburg College, Gettysburg, PA**

Physics Peer Tutor, Peer Tutors of Gettysburg College. Provide individual student tutoring for any students in Physics classes.

January 2004-May2004 **Gettysburg College, Gettysburg, PA**

Student Associate, Dr. Sharon Stephenson, Gettysburg College Physics Department. Lead class problem solving sessions, conduct tutoring sessions, provide individual tutoring in Physics.