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EDUCATION:

2006	Doctor of Education, Science Education Morgan State University
1999	Master of Education, Curriculum & Instruction Loyola University Maryland
1996	Bachelor of Science, Biology Loyola University Maryland

HONORS, AWARDS & SPECIAL RECOGNITION:

2023	The Association for Science Teacher Education (ASTE) Honors (In recognition for leadership as ASTE President)
2022	The Association for Science Teacher Education (ASTE) Presidential Gavel
2021	The Association for Science Teacher Education Honors (In recognition for leadership as Innovations in Science Teacher Education Editor)
2020	The Association for Science Teacher Education Honors (In recognition for leadership as

2004 Teacher of the Year, Beth Tfiloh Dahan Community School
2002 - 2003 Distinguished Title III Science Education Fellowship (\$25,937)
2001 - 2004 Morgan State University Science Education Department Stipend (\$9,000)
2001 Decosta Mathematics & Science Education Scholarship (\$2,232)

PROFESSIONAL EXPERIENCE:

June 2018 – Present Professor of Science Education; Towson University
June 2013 – May 2018 Associate Professor of Science Education; Towson University
August 2007 – May 2013 Assistant Professor of Science Education; Towson University
August 2006 – June 2007 Lecturer of Science Education; Towson University
January 2006 – August 2006 Adjunct Professor of Science Education; Towson University
August 2005 – June 2007 Director of ECE and ELED Student Internship Program;
Adjunct Professor; Washington Adventist University
August 2002 - June 2005 Teacher: Beth Tfiloh Dahan Community School
Courses: Physics, Algebra II, Honors Biology, Anatomy & Physiology
August 2000 - June 2001 Teacher: The McDonogh School
Courses: Physics, Chemistry, Biology
August 1999 - June 2000 Teacher: Patterson High School; Baltimore City Public Schools System
Courses: Physics, Chemistry, Anatomy & Physiology
August 1998 -

Sandifer, C., Lottero-Perdue, P., & **Miranda, R.J.** (2020). A 20-year journey in elementary and early childhood science and engineering education: An iterative cycle of reflection, refinement, and redesign. *Innovations in Science Teacher Education*, 5(4), 1-20.

Thompson, C., Sanchez, J., Smith, M., Costello, J., Madabushi, A., Schuh-Nuhfer, **Miranda, R.J.**, Gaines, B., Kennedy, K., Tangrea, M., & Rivers, D. (2018). Improving undergraduate life science education for the biosciences workforce: Overcoming the disconnect between educators and industry. *Cell Biology Education – Life Sciences Education*, 17(3), es12.

Miranda, R.J., Scott, J.E., & Schaefer, K.G. (2018). Characteristics of effective astronomer-educator partnerships in formal urban middle school classrooms. *Physical Review Physics Education Research*, 14(1), 010147.

Lottero-Perdue, P.S., Haines, S., Bamberger, H., **Miranda, R.J.** (2018). An innovation integrated STEM program for elementary teachers. *Innovations in Science Teacher Education*, 3(2), 1-20.

Miranda, R.J., Kruse, B., & Hermann, R.S. (2016). Exploring lunar and solar eclipses via a 3D modeling design task. *Science Scope*, 40(2), 30-38.

Miranda, R.J., & Hermann, R.S. (2015). Integrating continuous formative assessment into inquiry-based classroom instruction. *Science and Children*, 53(1), 17-25.

Miranda, R.J., & Damico, J.B. (2015). Changes in teachers' beliefs and classroom practices concerning inquiry-based instruction following a year-long RET-PLC program. *Science Educator*, 24(1), 23-35.

Miranda, R.J., & Van der Veen, W. (2014). Project ASTRO: Evolving to remain relevant. *Mercury*, 43(2), 33-39.

Miranda, R.J., & Damico, J.B. (2013). Science Teachers' Beliefs about the Influence of their Summer Research Experiences on their Pedagogical Practices. *Journal of Research in Science Teaching*, 50(1), 1-10.

Hermann, R.S., &

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Miranda, R.J (2022). Presidential Speaker Series: Strategic priorities of the association for science teacher education. *Proceedings of the 2022 School Science and Mathematics Association Convention. Missoula, Montana.*

Miranda, R.J., Gough, L., Hemm, M., & Agboka, T., Elkins, K., & Doyle, J. (2022) Professional development for STEM faculty developing inclusive course-based undergraduate research experiences (CUREs). *Proceedings of the 2022 Mid-Atlantic Association for Science Teacher Education Conference. West Portsmouth, Ohio.*

Miranda, R.J., Gough, L., Hemm, M., & Agboka, T. (2022). Virtual professional development for postsecondary science and mathematics faculty developing inclusive course-based undergraduate research experiences. *Proceedings of the 2022 Association for Science Teacher Education International Conference.*

Miranda, R.J., Gough, L., Hemm, M., & Atuobi, T. (2018). TU REP: Providing authentic research experiences in the college classroom to better educate all STEM. *Proceedings of the 2018 AACU Transforming STEM Higher Education Conference. Atlanta, Georgia.*

Miranda, R.J., Gough, L., Hemm, M., & Atuobi, T. (2018). Inclusive Excellence Professional Development for Postsecondary Biology Faculty Developing Course-based Undergraduate Research Experiences. *Proceedings of the 2018 Mid-*

Miranda, R.J. (2014; Invited Speaker). Changes in Teachers' Beliefs about Reformed Science Teaching and Learning, and their Inquiry-Based Instructional Practices Following a Year-Long RET-PLC Professional Development Program. *Proceedings of the American Geophysical Union, Francisco, California.*

Hermann, R.S. & **Miranda, R.J.** (2014). Embedding Vocabulary in an Inquiry-Based Lesson on Stratigraphic Principles. *Proceedings of the Maryland Association for Science Teachers, Baltimore, Maryland.*

Miranda, R.J. & Hermann, R.S. (2014) Integrating Scientific and Engineering Practices in an Inquiry-Based Lesson on Wind Powered Cars. *Proceedings of the Maryland Association for Science Teachers, Baltimore, Maryland.*

Miranda, R.J. & Damico, J.B. (2014). Changes in STEM Teachers' Beliefs about their Knowledge of, Experience with, and Comfort Level Planning and Implementing Inquiry-Based Instruction. *Proceedings of the Mid-Atlantic Association for Science Teacher Education, Blowing Rock, North Carolina.*

Miranda, R.J. & Damico, J.B. (2014). The role scientist mentors play with science teachers during a summer RET program. *Proceedings of the National Association for Research in Science Teaching, Pittsburgh, Pennsylvania.*

Miranda, R.J. (2014). Characteristics of effective4(r)-15(ac)-3(teri9Tf)-1ecanda, R.J.

- o **Miranda, R.J.**& HermannR.S54(. (2)-12(01)-73). InatratingsciencenatengiLeracfices in an inquiry

Miranda, R.J. (2011). Investigating the influence of astronomer-educator partnerships on urban middle school students' science learner characteristics. *Proceedings of the Association for Science Teacher Education, Minneapolis, Minnesota.*

Miranda, R.J.

2011-2014

January 2022 Presidential Panel. Talk presented at the International Association for Science Teacher Education Meeting; Greenville, South Carolina

January 2021 Presidential Panel. Talk presented at the Virtual Association for Science Teacher Education Meeting.

January 2021 Meet the Editors: Innovations in Science Teacher Education. Workshop presented at the Virtual Association for Science Teacher Education Meeting.

January 2020 Manuscript Reviewing 101: Honing Your Skills to be an Effective Reviewer. Workshop presented at the International Association for Science Teacher Education Meeting; San Antonio, Texas

January 2020 Meet the Editors: Innovations in Science Teacher Education. Workshop presented at the International Association for Science Teacher Education Meeting; San Antonio, Texas

January 2019 Manuscript Reviewing 101: Honing Your Skills to be an Effective Reviewer. Workshop presented at the International Association for Science Teacher Education Meeting; Savannah, Georgia

January 2019 Meet the Editors: Innovations in Science Teacher Education. Workshop presented at the International Association for Science Teacher Education Meeting; Savannah, Georgia

July 2018

August 2016	Invited to discuss the literary work, <i>The Sixth Extinction: An Unnatural History</i> (written by Pulitzer Prize winner Elizabeth Kolbert), with students at TU Honors College Orientation, Towson, MD.
July 2016	Project ASTRO. Workshop presented at The Maryland Science Center; Baltimore, MD.
May 2016	Current Research on Project ASTRO. 2016 Project ASTRO National Network Site Leaders Meeting in Tucson, AZ.
May 2016	Invited panelist for the Maryland State Department of Education (MSDE) / Maryland Science Supervisors Association (MSSA) Spring Briefing at Chesapeake College on the Eastern Shore.
March 2016	Invited to present an astronomy workshop to 25 Master Naturalist at the James and Anne Robinson Nature Center; Columbia, MD.
February 2016	Invited to speak to the Diversity Faculty Fellows at Towson University on the topic "Scholarship, Inclusion, and PTRM".
January 2016	Introducing the <i>Innovations in Science Teacher Education – A New Online ASTE Journal</i> . <i>The Association for Science Teacher Education, Reno, Nevada</i> .
November 2015	Comets. Invited workshop presented to science teachers in the Harford County Public School System.
September 2015	Invited speaker for the International Observe the Moon Night at the Benjamin Banneker Historical Park and Museum; Catonsville, MD.
August 2015	Invited speaker for the TU STEM Education Center's New FCSM Faculty Workshop.
August 2015	Project ASTRO. Workshop presented at The Maryland Science Center; Baltimore, MD.
July 2015	Evolving to Remain Relevant in Our Nation's Dynamic Educational Environment. Invited Plenary Speaker at the Accelerating Science Education Mobile Laboratory Coalition Conference; Baltimore, MD.
May 2015	Current Research on Project ASTRO. 2015 Project ASTRO National Network Site Leaders Meeting in San Francisco, CA.
August 2014	Project ASTRO. Workshop presented at The Maryland Science Center; Baltimore, MD.
May 2014	Current Research on Project ASTRO. 2014 Project ASTRO National Network Site Leaders Meeting in Traverse City, Michigan.
April 2014	Project ASTRO. Presented poster at the 7 th Annual Towson University Showcase; Towson, Maryland.
August 2013	Project ASTRO. Workshop presented at The Maryland Science Center; Baltimore, MD.
June 2013	National Project ASTRO National Network (PANN). Workshops presented at the 2013 PANN Site Leaders' Meeting.

January 2011

Galileo's Telescope and the Scientific Method. Workshop presented at the meeting of the Morgan State University's Annual Mathematics and Science Education Conference.

July 2010

Teaching the Urban Water Cycle in Middle and High School Classrooms Workshop presented at Towson University for 8 RET/graduate students and in-service teachers.

May 2010

Project ASTRO. Workshop presented at The Maryland Science Center; Baltimore, MD.

May 2010

October 2001

Hands-on Approaches to Teaching Sound, Color, Light, Electricity, and Magnetism. Workshop presented to science teachers in the Baltimore City Public School System

June 1999 - August 2002

NASA High School Internship Program (NASA-SHIP)

November 2010 Manager of Services for People with Disabilities for the regional NSTA Conference; Baltimore MD.

August 2011 Local Organizing Committee for the 2011 Astronomical Society of the Pacific Annual Conference; Baltimore, MD

July 2009 Paquin ES/MS Principal Panel Selection Committee

December 2009 Panel Member. The Fort Meade Alliance 3rd Annual Educational Forum; Fort Meade, MD.

SIGNIFICANT NATIONAL PANEL REVIEWING

2015 Panel Reviewer for the NSF Innovative Technology Experiences for Students and Teachers (ITEST) Program; Arlington, VA.

2013

July 2021	Loyola University Chicago
July 2021	University of Idaho
May 2020	University of Louisville
January 2019	University of North Carolina Wilmington
July 2018	Indiana University-Purdue University Indiana
August 2016	East Carolina University
August 2016	Bellarmino University
August 2015	Indiana University-Purdue University Indiana

JOURNAL AND TEXTBOOK REVIEWING (PEER-REVIEWED)

December 2022	Invited Reviewer for Journal of Chemistry Education
August 2021	Invited Reviewer for a manuscript submitted to Journal of STEM Outreach
July 2021	Invited Reviewer for a manuscript submitted to Journal of STEM Outreach
June 2021	Invited Reviewer for a manuscript submitted to Journal of STEM Outreach
May 2021	Invited Reviewer for a manuscript submitted to Journal of STEM Outreach
May 2021	Invited Reviewer for a manuscript submitted to Journal of STEM Outreach
April 2021	Invited Reviewer for a manuscript submitted to Physical Review: Physics Education Research
August 2020	Invited Reviewer for a manuscript submitted to Journal of STEM Outreach
May 2020	Invited Reviewer for a manuscript submitted to Physical Review: Physics Education Research
January 2020	Invited Reviewer for a manuscript submitted to Journal of STEM Outreach
January 2020	Invited Reviewer for a manuscript submitted to Physical Review: Physics Education Research
October 2019	Invited Reviewer for a manuscript submitted to Journal of STEM Outreach
January 2019	Invited Reviewer for a manuscript submitted to Physical Review: Physics Education Research
September 2018	Invited Reviewer for a manuscript submitted to Physical Review: Physics Education Research

September 2017	Invited Reviewer for a manuscript submitted to Physical Review: Physics Education Research
June 2017	Invited Reviewer for a manuscript submitted to Physical Review: Physics Education Research
May 2014	Invited Reviewer for a manuscript submitted to Urban Education
October 2013	Textbook Reviewer, National Science Teacher Association.
June 2013	Invited Reviewer for a manuscript submitted to Urban Education
June 2012	Invited Reviewer for a manuscript submitted to Urban Education

INTERNATIONAL/NATIONAL CONFERENCE REVIEWING (PEER-REVIEWED)

August 2021	ASTE Conference Paper Reviewer
August 2017	ASTE Conference Paper Reviewer
August 2016	ASTE Conference Paper Reviewer
August 2015	ASTE Conference Paper Reviewer
September 2014	NARST Conference Paper Reviewer
August 2014	ASTE Conference Paper Reviewer
September 2013	NARST Conference Paper Reviewer
August 2013	ASTE Conference Paper Reviewer (Equity and Diversity Strand)
August 2012	NARST Conference Paper Reviewer
October 2011	NARST Conference Paper Reviewer
August 2011	ASTE Conference Paper Reviewer
October 2010	NARST Conference Paper Reviewer
August 2010	ASTE Conference Paper Reviewer
October 2009	NARST Conference Paper Reviewer
September 2008	NARST Conference Paper Reviewer
August 2008	AERA Conference Paper Reviewer
September 2007	NARST Conference Paper Reviewer
September 2007	AERA Conference Paper Reviewer
May 2007	CUMU Conference Abstract Reviewer

UNIVERSITY COMMITTEES:

Spring 2023	Teacher Education Executive Board
Spring 2017 – Spring 2018	BTU President's Council (Appointed by the TU President)

Spring 2016 – Current	Appointment, Rank and Tenure of Faculty Document Review Committee (Appointed by the TU Provost)
Fall 2014 – Fall 2016	University Partnership Working Group Committee (Appointed by the TU Provost)
Spring 2010	University Middle States Re-accreditation Committee
Fall 2008	University STEM Steering Subcommittee, Towson University STEM Celebration and EXPO (Organizer)
Spring 2008 – Spring 2010	University STEM Steering Committee
Fall 2008 - Fall 2009	Teacher Education Executive Board
September 2007 – Jan 2008	Towson University Focus the Nation Organizing Committee (Chair)
May - October 2007	American Heart Association 2007 Heart Walk Logistics Committee (Chair; TU Chapter Organizer)
February - October 2007	Coalition of Urban and Metropolitan Universities (CUMU) Conference Programming Committee

COLLEGE COMMITTEES:

Fall 2013 - Spring 2016	College Promotion, Tenure, Reappointment, Merit Committee; (Chair 2015-2016)
Fall 2012 – Spring 2016	College Diversity Committee
Fall 2008 - Spring 2009	College Council (1 Year PAGS Sabbatical Replacement; 1 Year Recording Secretary Sabbatical Replacement)

DEPARTMENTAL COMMITTEES:

Fall 2022 – Current	Department Curriculum Committee (Chair)
June 2020	Department Merit Committee
June 2017 – June 2019	Department Merit Committee (Chair)
June 2016 – June 2018	Department Science Education Group Coordinator
Fall 2011	Department Science Education Group Coordinator

November 2017	Helped to organize and facilitate an astronomy program (9am-1pm) on-campus for 35 students and teachers from Chesapeake High School.
November 2016	Facilitated physical science shows with TU students (Kristen Zdon, Danielle Needham, Sophie Manik, Jana Serini, and Gabriella Harris) to 230 students at Norwood Elementary School; Baltimore, Maryland.
January 2016	Portable planetarium shows (3 Total) presented to 45 first and second grade students at St. Joseph School; Cockeysville, MD.
December 2015	Renaissance Academy HS Field Trip to Towson University. Facilitated an all-day astronomy schedule of events for 40 students, with the TU Society of Physics Students, and the TOPS program students at Towson University.
November 2015	Facilitated an Inquiry-based Activity on Wind-Powered Cars with 20 middle schools students participating in STEM Day at Towson University; Towson, MD.
July 2015	Facilitated Inquiry-based Astronomy Activities at TU with 70 middle school students participating in the Middle Grades Partnership (Mt. Royal MS/ McDonogh School); Towson, MD.
May 2015	Facilitated Inquiry-based Science Activities with TU pre-service teachers to 60 elementary students at St Elizabeth School; Baltimore, MD.
March 2015	Facilitated a 2-hr Star Party and activities on Constellations and Comets with 18 sixth grade students and their families at St. Joseph School; Cockeysville, MD.
March 2015	Portable Planetarium shows (3 total) presented to 45 home school students and parents at the Benjamin Banneker Historical Park and Museum; Catonsville, MD.
February 2015	Portable planetarium shows (3 Total) presented to 75 students (first grade) at Mount Washington Elementary School; Baltimore, MD.
November 2014 – May 2016	Mentored HS Student (Calvert Hall) 1 Hour/Week for their HS STEM Certification Program
July 2014	Portable Planetarium show presented to 11 students at the Benjamin

December 2013	Facilitated a week-long hands-on astronomy module on “Rocketry, Kepler’s Laws, and Comets” with 33 sixth grade students at St. Joseph School; Cockeysville, MD.
November 2013	Facilitated hands-on astronomy activities and planetarium show to the Hereford Boy Scout Troop with 5 Earth-Space Science Students.
October 2013	Planetarium shows (3 total) presented to 60 students from Baltimore City Public Schools participating in TU Building STEPS.
May 2013	Portable planetarium show presented to 25 Pre-K students at Hamilton Elementary School; Baltimore, MD.
May 2013	Portable planetarium shows presented to 50 students at Mount Washington Elementary School; Baltimore, MD.
April 2013	Portable planetarium shows presented to 310 students at Medfield Heights Elementary School; Baltimore, MD.
January 2013	Portable planetarium show presented to

January 2012	Portable Planetarium shows presented to 100 students (Grades K-1) at St. Joseph School; Cockeysville, MD.
January 2012	Portable Planetarium shows presented to 25 students (Grade 2) at Edgewood Elementary School; Baltimore, MD.
January 2012	Portable Planetarium shows presented to 35 members of the visiting public at the Oregon Ridge Nature Center; Hunt Valley, MD.
September 2011	Portable Planetarium shows presented to 54 students (Grade 1) at Yorkwood Elementary School; Baltimore, MD.
April 2011	Portable Planetarium shows presented to 225 students (Grades 3-8) at Garrett Heights Elementary/Middle School, Glenmount Elementary Middle School, and the Boy Scouts of America Regional Meeting at Sacred Heart Elementary/Middle School; Baltimore, MD.
January 2011	Portable Planetarium show presented to 25 students (Grades 9-12) at Patterson High School; Baltimore, MD.
October 2010	Portable Planetarium show presented to 30 students (Grades K-5) at Tridelphia Ridge Elementary School; Ellicott City, MD.
October 2010	Facilitated Inquiry-Based Science Activity on the Egg-Drop presented to 24 students (Grades 9-12) at Dundalk High School; Baltimore, MD.
June 2010	Portable Planetarium shows presented to 90 students (Grades K-5) at the Immaculate Heart of Mary School; Baltimore, MD.
May 2010	Portable Planetarium shows presented to 100 students (Grades 6-8) at Baltimore Rising Star Academy; Baltimore, MD.
April 2010	Portable Planetarium shows presented to 60 students (Grades 6-8) at Cockeysville Middle School; Baltimore, MD.
April 2010	Planetarium shows presented to 35 students from Friendship Academy of Science and Technology; Baltimore, MD.
March 2010	Portable Planetarium show presented to 25 community members at the Marshy Point Nature Center; Baltimore, MD.
January 2009	Portable Planetarium shows presented to 240 students (Grades PK-5) at Medfield Heights Elementary School; Baltimore, MD.
January 2009	Portable Planetarium show presented to 75 students (Grade 6) at Garrison Middle School; Baltimore, MD.
December 2009	Portable Planetarium shows presented to 140 students (Grades 9-10) at Baltimore Community School; Baltimore, MD.
December 2009	Facilitated Inquiry-Based Science Activity on Water Filtration presented to 70 students (Grades 6-12) at St Elizabeth School; Baltimore, MD.
December 2009	Portable Planetarium show presented to 25 middle school students in an after school science club at Chinquapin Middle School; Baltimore, MD.
May 2009	Facilitated Inquiry-Based Science Activity on Force and Motion presented to 70 students (Grades 6-12) at St Elizabeth School; Baltimore, MD.

April 2009	Portable Planetarium shows presented to 150 students (Grades 1-5) at Tridelphia Ridge Elementary School; Ellicott City, MD.
April 2009	Portable Planetarium shows presented to 120 students (Grades 3-7) at Rosemont Elementary/Middle School; Baltimore, MD.
February 2009	Portable Planetarium shows presented to 100 students (Grades 3-8) at Arlington Elementary/Middle School; Baltimore, MD.
January 2009	Portable Planetarium shows presented to 140 students (Grades 5-8) at Franklin Square Elementary/Middle School; Baltimore, MD.
January 2009	Portable Planetarium shows presented to 140 students (Grades 6-8) at Baltimore Rising Star Academy; Baltimore, MD.
November 2008	Portable Planetarium shows presented to 100 students (Grades 1-5) at Harriet Tubman Elementary School; Baltimore, MD.
October 2008	Portable Planetarium shows presented to 140 students (Grades 6-12) at St Elizabeth School; Baltimore, MD.
July 2008	Planetarium shows presented to 50 students (Grades PK-5) from the Harford County Celebree Learning Center.
July 2008	Planetarium shows presented to 60 students participating in the Middle Grades Partnership (Calverton Middle School).
May 2008	Portable Planetarium shows presented to 60 fifth grade students at Arlington Elementary School; Baltimore, MD.
May 2008	Portable Planetarium show presented to 25 students in an after school science club at Rosa Parks Middle School; Olney, MD.
April 2008	Planetarium shows presented to 57 students from Halethorpe Elementary School participating in TU College Horizons.
April 2008	Planetarium shows presented to 88 students from Reisterstown Elementary School participating in TU College Knowledge.
April 2008	Portable Planetarium show presented to 15 faculty/staff/community members at Arundel Elementary School; Baltimore, MD.
April 2008	Portable Planetarium show presented to 25 faculty/staff/community members at Southside Academy High School; Baltimore, MD.
April 2008	Portable Planetarium show presented to 20 faculty/staff/community members at Garrison Middle School; Baltimore, MD.
April 2008	Facilitated Inquiry-Based Science Activity on water filtration presented to 24 students (Grades 4-5) at Roland Park Elementary/Middle School; Baltimore, MD.
February 2008	Portable Planetarium shows presented to 140 students (Grades 9-12) at Southside Academy High School; Baltimore, MD.
February 2008	Portable Planetarium shows presented to 120 students (Grades PK-5) at James McHenry Elementary School. Baltimore, MD.

January 2008	Portable Planetarium show presented to 25 community members at Irvine Nature Center; Baltimore, MD.
January 2008	Portable Planetarium shows presented to 91 students (Grades 1-8) at Our Lady of Grace School. Baltimore, MD.
November 2007	Payloads in space. Workshop presented to 11 students participating in SciGirls at the Maryland Science Center; Baltimore, MD.
June 2007	Portable Planetarium shows presented to 160 students at George Washington Elementary School; Baltimore, MD.
May 2007	Portable Planetarium shows presented at Presented at the Baltimore Convention Center for the Baltimore Opportunity Summit; Baltimore, MD.