Ramón S. Barthélemy, Ph.D. Physics Education Researcher and Science Policy Scholar

Physics Education Researcher and Science Policy Scholar Focused on Equity and Inclusion in Graduate Physics and Astronomy Education <u>Recipient of the 2021 AAPT Doc Brown Futures Award</u> and the 2020 Fulbright Alumni Enrichment Award <u>Ramon.S.Barthelemy@GMail.com</u>

Education

Post-Doc	2015-16	AAAS Science Policy Fellowship U.S. Department of Education, Washington D.C. Worked in Federal Department of Education on national STEM education equity issues. Worked with executive branch committees and on national grant-giving programs. Wrote national policy on equity in STEM education.
Post-Doc	2014-15	Fulbright Fellowship Department of Teacher Education, University of Jyväskylä, Finland Conducted research on physics education in Finland, visited Finnish K-12 schools, instructed college courses on international education and equity in science. Led APS policy research.
PhD MA	2014 2012	Physics Education Research <i>Western Michigan University, Kalamazoo MI.</i> Focus and graduate level course work in (1) science education, teacher education, history and philosophy of science, (2) research methods and grant writing, and (3) physics. <i>Advisor: Dr. Charles Henderson</i>
BS	2010	Astrophysics Michigan State University, East Lansing MI. Course work in (1) physics, astronomy, mathematics and (2) Spanish. Advisors: Dr. Alexandra Gade and Dr. Megan Donahue

Experience

University of Utah Assistant Professor of Physics and Astronomy Salt Lake City, Utah	2019- Present	Lead developer of the PER PhD program. AWIS Virtual Visiting Scholar, Fulbright Scholar, AAPT Committee Member: Diversity in Physics, and APS Member at Large: Forum on Diversity and Inclusion. Raised over \$1,000,000 in grants, published 5 papers, and has given over 24 talks. Research focused on equity and inclusion in graduate education utilizing survey and interview methodology.
EAB (formerly The Advisory Board Company) Consultant Washington, D.C.	2017-19	Co-managed \$2.5M portfolio of university research executives, including relationship building and research. Designed and managed national studies on higher education including supervision of research employee. Traveled nationwide to present research and create sustainable relationships with clients. Designed presentations and written deliverables including blogs, books, executive summaries and marketing materials.
Solutions for Policy <i>Partner</i> Washington, D.C.	2016-19	Designed national and international surveys and research. Project managed studies and supervised research employees. Conducted statistical analyses on large data sets and synthesized for meaning. Projects included women empowerment in science education, gender differences in Nordic education.
Seattle Pacific Uni. Department of Physics Visiting Scholar	2015 July	Assessed university research programs for inclusion of and focus on students from diverse backgrounds. Helped to guide research into a direction inclusive of all potential students in USA.
University of Michigan Department of Physics Visiting Scholar	2014 Jan-Sep	Implemented a climate survey in cooperation with the REBUILD NSF WIDER grant, a \$2 Million grant to reform undergraduate STEM courses. <i>Advisor: Dr. Tim McKay</i>
Ramón S. Barthelemy		1

At the University of Utah- \$1,010,754 (\$50,000 internal)

NSF ECR	8/1/21 to 8/1/24	PI	NSF	\$391,559 (of~\$500,00)	Collaborative Research: Mapping professional support networks of women and (LGBT) gender and sexual minorities in physics
Admin. Supplement to Promote Diverse Research Comm.	6/1/21 to 6/2/22	PI	Internal (VPR)	\$50,000	Funding to recruit a postdoctoral scholar into my group to work on my NSF BCSER grant
NSF EHR BCSER	8/1/20 to 8/1/22	PI	#2023234	\$349,552	Ten Years Later: The Career Trajectories of Women and People of Color in Physics, Astronomy, and STEM
AWIS Virt. Scholar	8/1/20 to 8/1/21	PI		\$20,000	LGBT+ Faculty and Students in STEM: Policies to Support Success and Inclusion
NSF RAPID Grant on Graduate Education	1/1/20 to 7/1/21	PI	#2000328	\$198,143	Funding to study graduate education policies at the University of Utah
Fulbright Alumni Award	May to June 2022	PI		\$1,500	Travel to the University of Helsinki for collaboration.
Previous to the University of Utah- \$38,000					
Fulbright Fellowship	2014-15	PI		\$22,000	Funded travel and stipend for physics research in Finland.
Michigan Space Grant	2012-13	PI		\$10,000	Funded travel for in person interviews, research materials, transcription fees, and conference attendance for dissertation research.
Graduate Finance Grant	2013	PI		\$1,000	Funded guest speaker and departmental dinner for graduate students and faculty.
PERLOC Research Grant	2012	PI		\$2,500	Funded mixed-methods assessment of graduate students in PER. Conducted in person interviews across country and online survey.
AGEP Research Grant	2012	PI		\$1,500	Funded travel to interview graduate women in physics and astronomy for dissertation research.
WMU Graduate Research Fund	2011	PI		\$1,000	Funded pilot study for dissertation work to travel and conduct in person interviews.

Grants Applied

NSF Racial Justice	2021	PI	Pending	\$1,000,000	Post Baccalaureate Training Grant: Nanofabrication
NSF CAREER	2021	PI	Pending	\$1,000,000	Queer and POC Identity in STEM

Supervision

Post Docs					
	Camila Manni	PER	PI	Future	NSF EHR Core
	Dr. Brian Zamarripa Roman	PER	PI	Current	VPR Supplement Grant
	Dr. Miguel Rodriguez	PER	PI	Current	NSF BCSER Grant
	Dr. MacKenzie Lenz	PER	PI	2020-21	NSF Rapid Grant
Graduate					
Students					
	Madison Swirtz	PER	Chair	2021	Utah PhD Student
	Hillary Tribbs	Education	Member	2021	UCLA Ed.D. Student
	Josh Edwards	Chemistry Ed	Member	Current	Utah PhD Student
	Lorraine Laguerre	Chemistry Ed	Member	Current	Utah PhD Student
	Hannah Fritze	Astronomy	Member	Current	Utah PhD Student
	Benjamin Gibson	Astronomy	Member	Current	Utah PhD Student
	Mirna Mohammed	PER	Chair	Graduated '21	Utah MS Student
Undergraduate Students					
	Jessica Payton	PER	Advisor	Spring 2021	Undergrad RA
	Matthew Mikota	PER	Advisor	Summer 2020	REU in PER
	Danielle Brown	PER	Advisor	Spring 2020	Utah Physics Undergrad
	Alexandra Nelson	PER	Advisor	Spring 2020	Utah Physics UROP
	Tyra Imbico	PER	Advisor	Spring 2020	Utah ACCESS Student

Publications

Underlined authors are students, post-doc scholars, or trainees

In Preparation

Lenz, M., & Barthelemy. Graduate Students Experience of Graduate Program Reform.

Submitted

- Barthelemy, R, Lenz, M., Knaub, A., Sandick, P., & Gerton, J. A Case Study of Graduate Program Reform in Physics and Astronomy: From Tragedy to Progressive Policies and an Unchanged Culture. In preparation for *Physical Review Physics Education Research*.
- <u>Rodriguez, M.</u> & **Barthelemy, R.** Applying Critical Race Theory and Standpoint Theory to Studies on Underserved Groups in Physics Education Research. In Review for *Physical Review Physics Education Research*.
- Knaub, A., McCormick, M., & **Barthelemy, R.** The Greatest Accomplishments of Women in Graduate Physics and Astronomy Programs: Academic Recognition, Definitions of Success, and Survival. In preparation for *Physical Review Physics Education Research*.

Barthelemy, R., Atherton, T. et al. (2020). LGBT+ Physicists: Persistence, Harassment, and Uneven Support. Physical Review.

Barthelemy, R., Atherton, T., Hughes, B., & Mikota, M. (2021). The Workplace Climate for LGBT+ Physicists:

A View from Students and Professional Physicists. Physical Review Physics Education Research.

Peer Reviewed- Education Research

University of Utah Papers

Edwards, J., Barthelemy, R., Frey, G. (2021). The Relationship between Course-level Social Belonging, comprising Sense of Belonging and Belonging Uncertainty factors, and Academic Performance in General Chemistry 1. Journal of Chemical Education.

McCormick, M., Barthelemy R. (2020). Excluded from "inclusive" communities: LGBTQ youth's perception of "their" communities. Journal of Gay & Lesbian Social Services (2020): 1-25

Barthelemy, R. (2020). LGBT+ Physicists Qualitative Experiences of Exclusionary Behavior and Harassment. European Journal of Physics 41.6 (2020): 065703.

- **Barthelemy, R.** & Knaub, A., (2020). <u>The gendered aspirations and motivations of university physics students in Finland</u>. *Physical Review Physics Education Research* 16.1 (2020): 010133.
- Barthelemy, R., <u>Mohamed M.</u>, Knaub, A, & Henderson, C. (2020). <u>Graduate Programs in Physics Education Research:</u> <u>A USA Based Survey</u>. *Physics Education Research Conference Proceedings*.
- Barthelemy, R., McCormick, M., Henderson C. & <u>Knaub, A</u>. (2020). <u>Educational Supports and Career Goals of Five Women in a</u> <u>Graduate Astronomy Program</u>. *Physical Review Physics Education Research* 16.1 (2020): 010119.

Previous Papers

- Barthelemy, R., McCormick, M., & Henderson C. (2016). <u>Gender Discrimination in Physics and Astronomy</u> *Physical Review Physics Education Research* 12.2 (2016): 020119
- Sax, L., Lehman, K.J., & Barthelemy, R. (2016). Women's Interest in Physics: A Comparison to STEM Over Four Decades. Physical Review Physics Education Research 12.2 (2016): 020108.
- Traxler, A., Cid, X., Blue, J., & Barthelemy R. (2016). Enriching Gender in PER: A Binary Past and Complex Future. *Physical Review Physics Education Research* 12.2 (2016): 020114.
- Barthelemy, R., Hedberg, G., Greenberg, A., & McKay, T. (2015). <u>The Climate Experiences of Student in</u> <u>Introductory Biology</u>. *Journal of microbiology & biology education* 16.2 (2015): 138.
- Barthelemy, R., Van Dusen, B., & Henderson, C. (2015) <u>A Physics Subfield with Gender Parity: Physics Education</u> <u>Research</u>. *Physical Review Special Topics-Physics Education Research* 11.2 (2015): 020107.
- Barthelemy R., McCormick, M., & Henderson C. (2015). <u>Barriers Beyond Equity: An Exploratory study of Women</u> <u>Graduate Student's Career Pathways in Astronomy.</u> *International Journal of Gender, Science and Technology* 7.1 (2015): 57-73.
- McCormick, M., **Barthelemy, R.,** & Henderson, C. (2014). <u>Women's Persistence in Undergraduate</u> Astronomy: The roles of support, interest and capital *Journal of Women and Minorities in Science and Engineering*, 20(4).
- Patridge, E., **Barthelemy, R.**, & Rankin, S. (2014). <u>Factors Impacting the Academic Climate for LGBQ STEM Faculty</u>. Journal of Women and Minorities in Science and Engineering 20.1 (2014).
- Van Dusen, B., **Barthelemy, R.**, & Henderson, C. (2014). Educational trajectories of graduate students in physics education research. *Physical Review Special Topics-Physics Education Research* 10.2 (2014): 020106.
- Barthelemy, R., Henderson, C., & Grunert, M. (2013). How did they get here?: Pathways into physics education research. Physical Review Physics Education Research 12.2 (2016): 020113.(Editor's Pick)

Peer Reviewed Conference Proceedings- Physics Education (Previous to Utah)

- Knaub, A. & **Barthelemy, R.**, (2018). <u>Persistence and Career Choices of Finnish University Students</u>. *Physics Education Research Conference Proceedings*.
- **Barthelemy, R.**, McCormick, M., & Henderson, C. (2014). Understanding Women's Gendered Experiences in Physics and Astronomy Through Microaggressions. Physics Education Research Conference, Minneapolis, MN.
- Barthelemy, R., Grunert, M., & Henderson, C. (2012). The Research Subfield Choice of Women in Academic Physics: A Pilot Study. *Physics Education Research Conference Proceedings*.
- Henderson, C., **Barthelemy, R.,** Mestre, J., & Finkelstein, N. (2011). Physics Education Research Funding Census. *Physics Education Research Conference Proceedings*.

Peer Reviewed- Nuclear Physics and Astrophysics (Previous to Utah)

- Kobayashi, N.,...**Barthelemy, R.** (2016). One-Neutron Removal From NE 29: Defining the Lower Limits of the Island Inversion. *Physical Review C.*
- Kobayahsi, N, Kakamura, T.,...**Barthelemy, R.**, et al. (2014) Observation of a p-Wave One-Neutron Halo Configuration in 37Mg. *Physical Review Letters*. doi: 10.1103/PhysRevLett.112.242501.
- Kobayashi, N., Nakamura, T.,...Barthelemy, R. (2013). Breakup Reactions of Drip-Line Nuclei Near N=20,28. *Few-Body Systems*. doi:10.1007/s00601-013-0699-9.
- Hoffer, A., Donohue, M, Hicks, A., & **Barthelemy, R**. (2012). Infrared and Ultraviolet Star Formation in Brightest Cluster Galaxies in the ACCEPT Sample. *The Astrophysical Journal*, 199, 23.

Policy and Media Publications/Appearances

- Barthelemy R.S. (2020). LGBT+ Experience in Physics. Physics world Podcast.
- Barthelemy R.S. (2016). From Grass Roots to Changing Policy: LGBT advocacy in physics. Association for Women in Science Magazine. Winter 2017.
- Barthelemy, R.S. et al (2016). LGBT Climate in Physics. American Physical Society.
- **Barthelemy, R.S.** (2016). What racial, gender, and sexual orientation bias still exists in physics and what can I do about it? **Barthelemy, R.S.** (2016). How can I set up an effective mentoring program to support students in my department?
- Cochran, G. & Barthelemy, R. (2014). The Importance of Different Points of View. Society of Physics Students Obsersver.
 Barthelemy, R., Van Dusen, B., & Henderson, C. (2013). Graduate Students in Physics Education Research: Preliminary Results From a Web Survey. Published Online at

Atherton, T, Barthelemy, R., Deconinck, W., Long, E. et al. (2013). Supporting LGBT+ Physicists: A Best Practices Guide for Departments. <u>Published Online.</u>

Simmons, E.H. & Barthelemy, R. (2013). Climate Change for LGBT+ Physicists. Inside Higher Ed Article.

Technical Private Sector Reports

Client-facing publications written with extensive research from universities nationwide Barthelemy, R., (2018). Five Steps for Effective Seed Funding. EAB Publication https://www.eab.com/research-and-insights/university-research-forum/expert-insights/2018/five-steps-for-effective-seed-funding

Barthelemy, R., et al. (2017). Telling the Story of Research: Communication in Higher Education. *EAB Publication. [Proprietary]*

Talks

Symposium or Plenary Talks

- Barthelemy, R.S. (2021) Queering PER: Queer Rights in the US and Physics. American Physical Society and American Association of Physics Teachers Physics Teachers Conference. Virtual Plenary.
- Barthelemy, R.S. (2021) Supporting LGBT+ Students in High School Physics. American Physical Society and American Association of Physics Teachers Physics Teachers Conference. Virtual.
- Barthelemy, R.S. & Pearl Sandick (2020). Graduate Program Reform at the University of Utah: Student Experiences and the process of change. *AAAS Sea Change Symposium Series*. Virtual.
- Barthelemy, R.S. (2019). Identity Based Harassment: A Workshop on Emerging Research Themes. *AWIS ARC Network Conference*. Cleveland, OH.
- Barthelemy, R.S. (2019). Measuring Diversity and Inclusion in Large Introductory STEM Classes. *SEISMIC Sloan Conference*. University of Michigan, Ann Arbor, MI.

Barthelemy, R.S. (2019). A Closer Look at STEM Equity and Inclusion. AWIS Innovation Summit. Washington, DC.

Barthelemy, R.S. (2016). Campus Inclusivity in STEM. University of Cincinnati. Cincinnati, OH.

- Barthelemy, R.S. (2016). Diversity and Inclusion Symposium Speaker. Optical Society of America. Rochester, NY.
- Barthelemy, R.S. (2016). LGBT Climate in Physics. American Association for the Advancement of Science. Washington, D.C.
- Barthelemy, R.S. (2016). The Department of Education and Science Education Policy. *American Association of Physics Teachers*. New Orleans, LA.

Invited

- Barthelemy, R. (2021). LGBT Climate in Physics: A Grass Roots Movement to APS Policy Change. American Association of *Physics Teachers*. Virtual.
- Lenz, M. & Barthelemy, R. (2021). Graduate Program Reform in Physics: Policy, Tragedy, and Culture. *American Association of Physics Teachers*. Virtual.
- Barthelemy, R.S. (2021) Queering PER: Queer Rights in the US and Physics. Rutgers REU Program. Virtual.
- Barthelemy, R.S. (2021) LGBT+ in Academia: A Panel Discussion. IOP. England, Virtual.
- Barthelemy, R.S. (2021). LGBT Climate in Physics: A Grass Roots Movement to APS Policy Change. University of Dayton. Virtual.
- Barthelemy, R.S. (2021). LGBT Climate in Physics: A Grass Roots Movement to APS Policy Change. *Weber State University*. Virtual.
- Barthelemy, R.S. (2020). Professional Skills for Students. AAPT Virtual Meeting.
- Barthelemy, R.S. (2020). LGBT Climate in Physics: A Grass Roots Movement to APS Policy Change. *Florida International University STEM Education Group*. Virtual.
- Barthelemy, R. (2020). Physics education research: Who we are and changing the research we do to be more equitable and inclusive. American Chemical Society: DEI Webinar.
- Barthelemy, R. (2020). Physics education research: Who we are and changing the research we do to be more equitable and inclusive. American Physical Society 4CS Conference. Virtual.
- **Barthelemy, R.,** Mohamed, M., Knaub, A., & Henderson, C. (2020). Graduate programs in PER: A USA based survey. Presentation for the *Chinese Physical Society*. Virtual (Beijing, China).
- Barthelemy, R.S. (2020. The APS Forum on Diversity and Inclusion. DOMAP Talk to Gender and Diversity group.
- **Barthelemy, R.S.** (2020). From Grass Roots to Policy Change: The LGBT+ Physicist. Colloquia at Oregon State University Department of Physics.
- Barthelemy, R.S. (2020). Measuring Inclusion in Large Introductory STEM Courses. Colloquia at the University of California Santa Barbra Center for Teaching and Learning.
- Barthelemy, R.S. (2020) (DECLINED) California Lutheran University
- Barthelemy, R.S. (2019). Professional Growth Through the AAAS Policy Fellowships. AAAS. Washington, DC.
- Barthelemy, R.S. (2019). Physics Education Research. ACCESS Students Orientation. Salt Lake City, UT.
- Barthelemy, R.S. (2019). Gender Research in PER: A Binary Past and Complex Future. American Physical Society

March Meeting. Boston, MA.

- Barthelemy, R.S. (2019). Gender Research in PER: A Binary Past and Complex Future. University of Utah Colloquia. Salt Lake City, UT.
- Barthelemy, R.S. (2019). Gender Research in PER: A Binary Past and Complex Future. University of Illinois Urbana Champaign. Champaign, IL.
- Barthelemy, R.S. (2019). Gender Research in PER: A Binary Past and Complex Future. Auburn University Colloquia. Auburn, AL.
- Barthelemy, R.S. (2016). Diversity Challenges in Physics. FEMMSS. South Bend, IN.
- Barthelemy, R.S. (2016). Physics education a research: A broader look at equity. *American Association of Physics Teachers*. Sacramento, CA.
- Barthelemy, R.S. (2016). Institutional and social barriers that limit the success of marginalized students. New Orleans, LA.
- Barthelemy, R.S. (2016). LGBT Climate in Physics. National Science Foundation Advance Workshop. Baltimore, MD.
- Barthelemy, R.S. (2016). (Panel Member) Sexual harassment and gender bias in physics. American Physical Society. Salt Lake City, UT.
- Barthelemy, R.S. et al. (2016). (Panel Member) LGBT Issues Panel Discussion. American Physical Society. Salt Lake City, UT.
- Barthelemy, R.S. (2016). Institutional and Social Barriers That Limit the Success of Marginalized Students. *American* Association of Physics Teachers. New Orleans, LA.
- McCormick, M., & **Barthelemy**, **R.** (2015). Women's Persistence in Undergraduate Astronomy: The Roles of Support, Interest, and Capital. *American Association of Physics Teachers Summer Conference*. College Park, MD.
- Blue, J., Traxler, A., Cid, X., & **Barthelemy, R.** (2015). Gender in PER: What's Been Done, How Should We Move Forward? *American Association of Physics Teachers Summer Conference*. College Park, MD.
- Barthelemy, R. (2015). Gendered Microaggressions in Physics: Creating a Language to Discuss Sexism. *Rochester Institute of Technology, STEM Center*. Rochester, NY.
- Barthelemy, R. (2014). Teaching About Women in STEM: Understanding Race, Sexuality, and the Many Identities Women Hold. *American Association of Physics Teachers Summer Conference*. Minneapolis, MA.
- **Barthelemy, R.**, & McCormick, M. (2014). Why Aren't They Here?: The Impacts of Society's and Physics' Cultures on Women's Participation in Physics. *American Association of Physics Teachers Winter Conference*. Orlando, FL.
- Barthelemy, R., Van Dusen, B., & Henderson, C. (2014). Graduate Students in PER: Demographics, Trajectory, and Climate Experiences. American Association of Physics Teachers Winter Conference. Orlando, FL.
- Rankin, S., **Barthelemy, R.**, Patridge, E. (2012). The Experience and Persistence of LGB STEM Faculty. *American Physical Society Conference*. Boston, MA.

Contributed

- Rodriguez, M. & Barthelemy R. (2021). Critical Race Theory for Physicists. American Association of Physics Teachers. Virtual.
- Mohamed, M., Barthelemy, R., Knaub, A., & Henderson, C. (2020). Graduate programs in PER: A USA based survey. Presentation for *American Association of Physics Teachers*. Virtual.
- Mikota, M. & Barthelemy, R. (2020). Workplace climate for LGBT+ Physicists: Predictors of outness. Presentation for *American Association of Physics Teachers*. Virtual.
- Sandick, P., Barthelemy, R., & Gerton, J. (2020). Graduate program reform at the University of Utah. Presentation for *American Association of Physics Teachers*. Virtual.
- Knaub, A. & Barthelemy, R. (2018) Persistence and Career Choices of Finnish University Students. Conference Presentation for *American Association of Physics Teachers*. Washington, D.C.
- Barthelemy, R. (2014). Inequality in America: How Birth Can Determine Path. Fulbright American Voices Seminar. Turku, Finland.
- Barthelemy, R. (2014). School Life in America. Talk to K-12 Students in Seinäjoki, Finland.
- McCormick, M., & Barthelemy, R. (2014). Women's Persistence in Undergraduate Astronomy: The Roles of Support, Interest, and Capital. *Midwest Sociology Conference*. Omaha, NB.
- Barthelemy, R., McCormick, M., & Henderson, C. (2013). Barriers Beyond Equity: Motherhood in Astronomy. Conference Presentation for *Michigan Space Grant Conference*. Ann Arbor, MI.
- Barthelemy, R., McCormick, M., & Henderson, C. (2013). Barriers Beyond Equity: The Experiences of Women in Astronomy. Conference Presentation for *Association for Graduate Experience and Professoriate*. East Lansing, MI.
- Barthelemy, R., Van Dusen, B., & Henderson, C. (2013). The Demographics of Graduate Students in PER. Conference Presentation f or *American Association of Physics Teachers*. Portland, OR.
- Barthelemy, R., Van Dusen, B., & Henderson, C. (2013). The Demographics and Experiences of Graduate Students in PER. Poster Presentation for *Physics Education Research Conference*. Portland, OR.
- Barthelemy, R., McCormick, M., & Henderson, C. (2013). Shooting For the Stars: Lessons From Astronomy. Conference Presentation for *American Philosophical Association Diversity Conference*, Dayton, OH.
- Patridge, E., Barthelemy, R., & Rankin, S. (2013). Factors Impacting the Academic Climate for LGBQ STEM Faculty. Conference Presentation for *OXIDE's 2013 NDEW Event*. Arlington, VA.

- Taibu, R., Mataka, L., & Barthelemy, R. (2013). Alternative Concepts About Weight and Gravity. Conference Presentation for *National Association of Research in Science Teaching*. San Juan, Puerto Rico.
- McCormick, M., & Barthelemy, R. (2013). Underrepresentation of Women in University Physics.

Conference Presentation for Midwest Sociological Society. Chicago, IL.

Barthelemy, R. (2013). Graduate School Preparation and Expectations. *Panel Talk to Sigma Lambda Theta Fraternity*. Kalamazoo, MI.

Barthelemy, R., Henderson, C., & Grunert, M. (2013). "Pathways not pipeline!" Recruiting Women into Physics. Conference Presentation for the Nuclear Data and Technology Conference. New York, NY.

Barthelemy, R. (2013). The Social Construction of Knowledge. Conducted workshop for the Department Gender and Women's Studies' instructors on how to interpret, analyze, and include science in their classrooms. Kalamazoo, MI.

Barthelemy, R., Henderson, C., & Grunert, M. (2012). Gender Bias in Physics Education. Conference Presentation for *AGEP Michigan Meeting*. East Lansing, MI.

Barthelemy, R., Henderson, C., & Grunert, M. (2012). The Graduate Research Field Choice of Women in Academic Physics and Astronomy. Conference Presentation for *American Association of Physics Teachers*. Philadelphia, PA.

Barthelemy, R., Henderson, C., & Grunert, M. (2012). Subjective Task Value and The Choices of Women in Physics: Poster Presentation for *Physics Education Research Conference*. Philadelphia, PA.

Barthelemy, R. (2012). Gender and Sexual Diversity Issues in Undergraduate STEM Degrees: *Presentation to Student Group at Johns Hopkins University*. Baltimore, MD.

Barthelemy, R. & Henderson, C. (2011). Diversity in Physics Education. Conference Presentation for *AGEP Michigan Meeting*. East Lansing, MI.

Barthelemy, R., & Henderson, C. (2011). Physics Faculty Hiring. Conference Presentation for *American Association of Physics Teachers*. Omaha, NE.

Barthelemy, R., Henderson, C., Mestre J., & Finkelstein N. (2011). Physics Education Research Funding Census. Poster Presentation for *Physics Education Research Conference*. Omaha, NE.

Barthelemy, R. (2010-2013). Gender Bias in Academia. Guest Lecturer, Introduction to Sociology. Kalamazoo, MI.

Barthelemy, R. (2010). Detection of Brightest Cluster Galaxies. Professional Talk to MSU Astronomy Department. East Lansing, MI.

Barthelemy, R. (2008-2009). History and Philosophy of Science Introductory Course. *Guest Lecturer on Technology in Ancient Korea*. East Lansing, MI.

Fellowships

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AWIS Virtual Visiting Scholar	2020-2021	Stipend to conduct literature review on LGBT in STEM
AAAS Science Policy Fellowship	2015-2016	Stipend to work in Federal Department of Education
Fulbright	2014-15	Travel and stipend to conduct research in Jyväskylä Finland
National Science Foundation AGEP	2011-14	Tuition and stipend for completion of PhD
Michigan Space Grant	2012-13	Research and conference travel funding
NSF S-STEM Improve	2011-13	Summer tuition and stipend for completion of PhD
Lawrence W. Hantel Endowed	2009-10	Undergraduate research funding

Awards

Recipient	2021	Doc Brown Futures Award	Award from the American Association of Physics Teachers
Recipient	2020	Fulbright Finland	Fulbright Alumni Award
Recipient	2018	EAB	Team Award for Exemplary Service and Research
Recipient	2014	University of Michigan	NCID Exemplary Diversity Scholar Award
Recipient	2014	Western Michigan University	Institute for Science Education Doctoral Research Award
Recipient	2013	Western Michigan University	Gender and Women's Studies Gwen Raaberg Teaching Award
Recipient	2012	oSTEM Incorporated	Exemplary LGBTQA+ Advocacy in STEM Fields
Recognition	2012	American Physical Society	American Physical Society Physicists Profile Article
Recognition	2013	Western Michigan University	Quarterly News Article on Research and Teaching
Recipient	2006	Michigan State University	Multicultural Acknowledgement of Academic Achievement

Research

University of Utah, Salt Lake City

Diversity and Inclusion in STEM Introductory Courses: Current

Principal Investigator

Designing quantitative study to assess the impact of student perceptions of D&I on their final course grades and learning outcomes

BCSER Ten Years Later: women in Physics and Astronomy and Students of Color in STEM (NSF Funded): Current Principal Investigator

Policies and Practices in Graduate Physics and Astronomy (NSF Funded): Current Principal Investigator

Physics Education Research Graduate Programs: 2019-2020 Principal Investigator

Survey to assess graduate PER programs nationwide for structure and student preparation.

EAB, Washington DC

Faculty Research Development: Fall 2017-Winter 2018

Principal Investigator

Designed qualitative research protocol to investigate best practices for communicating academic research to the general public.

Research Communications in Academic Science: Spring 2017

Principal Investigator

Designed qualitative research protocol to investigate best practices for communicating academic research to the general public.

University of Jyväskylä, Finland

Physics in Finland: An Assessment of Motivation, Climate, and Gendered Experiences: Fall 2014-Winter 2015 Principal Investigator

Designed survey instrument to assess student motivations to pursue physics, career goals, climate experiences and persistence

University of Michigan

The Classroom Climate of Students in Introductory Biology: 2014

Co-Principal Investigator, Collaborators: Tim McKay (UM), REBUILD Research Group Designed survey sent out to students in introductory biology to assess their comfort, interactions with faculty and students, and more. Analyzed data using SPSS and wrote up publication

Western Michigan University

Women's Educational Experiences in Academic Physics and Astronomy: 2011-2014

Principal Investigator, Collaborators: C. Henderson (WMU), M. McCormick (WMU) Used in-depth in person interviews to collect data on the graduate experiences of women in physics and astronomy. I designed the project, conducted all the data collection, and co-analyzed data with Ms. McCormick. I also supervised undergraduate students in transcription of the audio-recorded interviews. Co-presented an invited talk on the project.

The Bullying Experiences of LGBT Youth: 2014

Collaborator, Principal Investigators: Angie Moe (WMU), Melinda McCormick (WMU) Discussed project design with PI Ms.

The Experiences of Graduate Students in Physics Education Research: 2012-'14

Principal Investigator, Collaborators: B. Van Dusen (CUB), C. Henderson (WMU)

Conducted in person interviews with graduate students in PER and analyzed all data to understand their graduate experiences. Co-created survey instrument with Dr. Van Dussen and launched online survey to assess experiences of all graduate students in PER. Co-presented an invited talk on the project.

The Impact of Climate Factors on the Persistence of LGBTQ STEM Faculty: 2011-'13

Co-Principal Investigator, Collaborators: S. Ranking (Pennsylvania State), E. Patridge (Yale) Analyzed survey data on the experiences of LGBQ STEM faculty to understand their climate perceptions and the impact it had on persistence. Co-presented an invited talk on the project.

Physics Education Research Funding Census: 2011

Research Assistant, Collaborators: C. Henderson (WMU), N. Finkelstein (CUB), J. Mestre (UIUC) Used grant databases to collect all PER grants within last decade at time of project.

TOF Nuclear Measurements: 2010

Ramón S. Barthelemy

Research Assistant, Experimental Nuclear Physics Group at Western Michigan University Riken Rare Ionizing Beam Factory: Wako, Japan 2010 Experiment Aide

Worked shifts in Wakoishi, Japan taking online data for mass measurement experiment.

Michigan State University

Brightest Cluster Galaxies Instrument Analysis: 2010

Collaborative and Independent research project

Analyzed data taken from space based telescopes and developed models for light detection in telescopes and various thresholds for detection.

PhD Thesis Experiment Assistant at Michigan State University: 2009

Researched, calculated, and implemented radiation shielding for detector array. Analyzed data to understand effects of magnetic field intensities and calibrated detectors for data acquisition and analysis.

Gamma Ray Spectroscopy: 2007-'09

Data Analyst and Lab Aide

Prepared high-end nuclear physics detectors for efficiency and accuracy. Analyzed data obtained from experiments done with Cyclotron Beam Line and adhered to and enforced radiation safety and protocol.

Teaching

University of Utah Calculus Based Introductory Physics Instructor, Fall 2019 (in person), Fall 2020 (online)

Physics Education Research Instructor, Spring 2020 (in person/online)

University of Jyväskylä, Finland

Race and Gender in Science

Instructor, Summer 2015 in Humanities Summer School

Taught intensive week-long graduate seminar on issues of race and gender in science. Explored the history of how race and gender have been understood in science, and used to perpetuate social conditions and hierarchies. Also deconstructed notions of what is science and the current make up of scientists.

International and Intercultural Education

Instructor, Winter 2015

Taught masters course on topics of race, gender, class, and culture in the classroom. Emphasis was placed on the primary school classroom in how we teach and interact with a diverse set of students.

Western Michigan University

Teaching and Learning of Physics: Western Michigan University Instructor, Fall 2013

Co-taught upper-division course on curriculum design, pedagogy, and teaching methods in high school physics. Supervised undergraduate students in construction of lessons and development as critical teachers.

Race, Gender and Science: Western Michigan University

Instructor, Spring 2012, Fall 2012, Fall 2013

Designed and taught upper-division course on historical, philosophical, and sociological aspects of race and gender in science. Course was taken by juniors and seniors and had a parallel focus on student writing, presentation skills, and analytical thinking. Course has since been institutionalized in the department and is now a general education course.

Introduction to Sociology: Western Michigan University

Guest Lecturer, 2010-13

Presented one lecture a semester on gender issues in the sciences to facilitate candid discussions and thoughts on gender in the modern world.

Mechanics and EM for Scientists and Engineers: Western Michigan University Substitute Lecturer, 2010-11

Designed and implemented lessons on various physics topics as substitute instructor for the course.

Electricity and Magnetism for Scientists and Engineers: Western Michigan University Teaching Assistant, 2010

Graded class assignments, led review sessions for exams, and held office hours to help students.

Michigan State University

Integrated Studies in the Physical Sciences: Michigan State University

Teaching Assistant, 2009

Developed grading rubric and applied it to student assignments. Met with students in office hours to discuss physics material and course concepts.

Service

Physical Review Guest Editor: Special Collection on	American Physical Society	2021-23
Qualitative Research Methodology in PER	· · ·	
The Physics Grad School Primer Adv. Board Member	University of Dayton	2021-24
APS EP3 Physics Education Guide Reviewer	American Physical Society	2021
Committee on Diversity in Physics	American Association of Physics Teachers	2021-24
Supported Astro and CME Faculty Searches	University of Utah	2021
College of Science Committee	University of Utah	2020-21
General Education Brain Trust	University of Utah	2020-21
Forum on Diversity and Inclusion Member at Large	American Physical Society	2020-23
SEISMIC Grant Advisory Board Member	University of Michigan	2020-23
Safety in Sciences Conference Organizer and Moderator	University of California	2020-21
P&A Committee: Undergraduate Curriculum Reform	University of Utah	2020
P&A Committee: Undergraduate Research Committee	University of Utah	2019-20
P&A Committee: Diversity and Inclusion	University of Utah	2019-20
Physical Review PER Reviewer	American Physical Society	2011-Present
National Science Foundation Grant Reviewer	National Science Foundation	2019-Present
Conference Organizer	Association for Women in Science	2019
Media Interviews		2019-21
(Science Magazine, The Scientist, APS, Physics World)		

Physics Education Research Conference Organizer

Volunteer

Organized 2020 summer PERC panel discussion titles "The Past, Present, and Future of PER"

American Association of Physics Teachers

Organizer

DEI Resource Room LGBT+ Discussion, 2020 Meet up- LGBT+ Physicists, 2020 Meet up- LGBT+ Physicists, 2021 LGBT+ Physicists: Research and Perspectives, Conference Session, 2021

Committee on Women Member

Volunteer member for the committee on women in physics, 2014-2017 Organized Sessions for annual conferences: Decreasing Stereotype Threat in Discourse and Assessment (San Diego 2014), Gender and Sexual Diversity Issues in Physics (Portland, 2013), The Interaction of Gender and STEM (College Park, 2015)

American Physical Society Ad Hoc Committee on LGBT Issues in Physics Committee Member 2014-2015

Design and Implement world-wide research to assess the climate and persistence of LGBT+ Physicists

LGBT+ Physicists

Volunteer as part of the LGBT+ Physicists National Working Group, 2012-Present

Co-wrote best practices guide for including LGBT+ persons in department of physics, which was distributed to department chairs across the nation through a national conference. Successfully proposed to the American Physical Society to include sexual orientation on their surveys. Organized Gender and Sexuality Session at AAPT 2013 meeting and networking meeting for LGBT+ Physicists

Reviewer for American Journal of Physics, Physical Review Special Topics- Physics Education Research, Physics Education Research Conference, National Association for Research in Science Teaching Conference, Journal of Geosciences Education, and Journal of Women and Minorities in Science and Engineering *Reviewed journal articles, conference papers, and conference proposals, 2011-2020*

World Wide Educational Group Treasurer: WMU Chapter Organized guest scholar speaker series including applying for and receiving internal funding, 2012 Physics Education Research (PER) Graduate Student National Board Co-Organized graduate student initiative to have national representation in PER community, 2012

oSTEM Chapter at Western Michigan University Founder

Founded chapter of a professional organization for LGBT STEM students at WMU. Facilitated weekly meetings and created selfsustaining organization that was passed down to students, 2011-12

Science Advocacy: Lobbying Capitol Hill, Washington DC Volunteer for Facility for Rare Isotope Beams at Michigan State University, 2012

Way To Go Science Camp, Kalamazoo, MI Volunteer, 2011

Michigan State University Residence Life, East Lansing, MI Resident Advisor (RA), 2008-10

YMCA Camp Pendalouan, Montague, MI Summer Camp Counselor, 2006

Languages

EnglishC2: Native writing, reading, and spokenSpanishB1: Intermediate writing, reading, and spoken

Memberships

1			
American Physical Society	Member	2011-Current	(Lifetime Member)
American Association of Physics Teachers	Member	2011-Current	
ASHE (higher Education society)	Member	2020	
NORDP	Member	2018	
National Association of Research in Science Teaching	Member	2013	
Society for the Psychology of Women	Member	2013	
European Science Education Research Association	Member	2012	
oSTEM Chapter at Western Michigan University	Founder	2011-2012	
National Society of Hispanic Physicists	Member	2010	
American Astronomical Society	Member	2009	
National Society of Physics Students	Member	2008 -10	
American Association of Physicists in Medicine	Member	2008	
Michigan State Society of Physics Students	Member	2006 -10	

Skills and Professional Development

• SPSS: Statistical software package and Hyper Research

• Supervised undergraduate students in nuclear physics lab and physics education group.

• Project management of national level surveys, including the supervision of employees.

<u>Graduate Science Education Course Work</u>: Cognition and Teaching, Qualitative and Quantitative Research Methods, Grant Writing, History & Philosophy of Science, Teaching and Learning of Science, Curriculum Development, and Research Traditions in DBER <u>Graduate Physics Course Work</u>: Mathematical Methods, Classical Mechanics, Quantum Mechanics, Nuclear Physics Research, Research Seminar, and Electricity and Magnetism.

Graduate Gender Studies Courses: Independent studies in Feminist Research Methodologies and Feminist Literature in DBER Education.

Workshops attended: Gender Bias in Academic Physics (AAPT 2011), The Gender Gap in Physics Classrooms (AAPT 2012), Transnational Feminist Issues (Gender and Women's Studies Program 2012), Masculinity Studies (GWS 2012), Transgender Issues (GWS 2012).

<u>Workshops Conducted</u>: How science can help the gender and women's studies classroom (Department of Gender and Women's Studies Western Michigan University, 2012) and Preparing for a career in Physics Education Research: Planning your education and applying to jobs (American Association of Physics Teachers Conference, 2014).