

Melissa Eblen-Zayas

Department of Physics and Astronomy, Carleton College, One North College St, Northfield, MN 55057
Phone: 507-222-5367, meblenza@carleton.edu

EDUCATION AND PROFESSIONAL EXPERIENCE

Carleton College, Northfield, MN	
Professor of Physics	2018 - present
Director, Perlman Center for Learning and Teaching & Humphrey Doermann Professor of Liberal Learning	2016 - 2020
Chair, Department of Physics and Astronomy	2012 - 2016
Associate Professor of Physics	2011 - 2018
Assistant Professor of Physics	2005 - 2011
Ph.D., University of Minnesota, Minneapolis, MN	June 2005
Dissertation: "Electrical Modification of Disordered and Correlated Electron Systems" Preparing Future Faculty Program	
B.A. <i>magna cum laude</i> , Smith College, Northampton, MA	May 1999
Major: Physics Minor: History Honors Thesis: "Calorimetric Investigation of Phase Transitions in Quasi-One-Dimensional Metals"	

TEACHING INTERESTS & EXPERIENCE

- Teach core courses throughout the introductory and intermediate physics curriculum and advanced courses in Electronics, Solid State Physics, and Contemporary Experimental Physics with a focus on increasing my use of research-based approaches to enhance inclusion and equity. Occasionally teach environmental studies course.
- Committed to thoughtful consideration of how technology can enrich teaching and learning in the residential liberal arts college context.
- Incorporated academic civic engagement projects in physics and environmental studies and developed new models for project streams to connect curricular and co-curricular opportunities.
- Proposed, designed, and developed the hybrid Carleton Undergraduate Bridge Experience (CUBE) beginning in 2016 to provide incoming first-year students the opportunity to review quantitative skills, explore their application to many disciplines, and create an early connection with the Carleton community. This program included Carleton's first online course. Taught CUBE from 2016-2019.

RESEARCH INTERESTS & EXPERIENCE

- Scholarship on pedagogy, teaching, and learning, with particular interests in quantitative skills and the physics advanced laboratory curriculum.
- Experimental condensed matter physics research on the electronic and magnetic properties of correlated electron materials.
- Conceptualized and led a multi-campus development and educational research pilot project that created a framework for developing online modules focused on quantitative skills (QS) and their applications, and assessed faculty use of and student engagement with modules (2016-2017). This led to an externally-funded research project (QLAB) aimed at improving understanding of effective practices for the use of online modules to support students' QS development and factors that impact faculty choices about using modules (2019-present).

PUBLICATIONS

Book chapters

2020 M. Eblen-Zayas, "Development and Supervision of Independent Projects," in *Experimental Physics: Principles and Practice for the Laboratory*, ed. W. F. Smith, CRC Press.

Peer-reviewed articles, conference proceedings, digests

- 2021 M. Eblen-Zayas, "Promoting transparency when experienced faculty transition to online teaching", Forthcoming in May issue of *Journal of Faculty Development*
- 2020 M. Eblen-Zayas, E. Altermatt, L. Muller, J. Leamon, S. Richard, "Supporting student quantitative skills across introductory STEM courses: faculty approaches and perceived needs", *2020 Physics Education Research Conference Proceedings*, edited by S. Wolf, M. B. Bennett, and B. W. Frank, 137, doi: [10.1119/perc.2020.pr.Eblen-Zayas](https://doi.org/10.1119/perc.2020.pr.Eblen-Zayas)
- 2019 M. Eblen-Zayas and Janet S. Russell, "Making an online bridge program high touch," *Journal of College Student Development* **60**, 104, doi: [10.1353/csd.2019.0006](https://doi.org/10.1353/csd.2019.0006)
- 2018 M. Eblen-Zayas and R. C. Terrien, "Lessons learned from five years of student self-directed experimental projects in the advanced lab," *2018 Conference on Laboratory Instruction Beyond the First Year of College Proceedings* [Baltimore, MD, July 25-27, 2018], edited by M. Eblen-Zayas, E. Behringer, M. Dark McNeese, and E. Geneston, doi:[10.1119/bfy.2018.pr.003](https://doi.org/10.1119/bfy.2018.pr.003)
- 2016 M. Eblen-Zayas, "The impact of metacognitive activities on student attitudes towards experimental physics," *2016 PERC Proceedings*, edited by D. L. Jones, L. Ding, and A. Traxler, 104, doi:[10.1119/perc.2016.pr.021](https://doi.org/10.1119/perc.2016.pr.021)
- 2015 M. Eblen-Zayas, "Comparing electronic and traditional lab notebooks in the advanced lab," *2015 Conference on Laboratory Instruction Beyond the First Year of College Proceedings*, edited by M. Eblen-Zayas, E. Behringer, and J. Kozminski, doi:[10.1119/bfy.2015.pr.007](https://doi.org/10.1119/bfy.2015.pr.007)
- 2013 M. Eblen-Zayas, "Development of a materials science course to serve diverse constituencies," *ASEE Annual Conference Proceedings*, <https://peer.asee.org/19430>
- 2010 M. Eblen-Zayas, T. Brenner, B. Colwell, C. Carter, B. Schuster, S. Schlotter, "Impact of substrate heating during growth on transport and magnetization response of Eu-rich EuO thin films," *11th Joint MMM/Intermag Conference Digest*, 1170
- 2005 M. Eblen-Zayas, A. Bhattacharya, N.E. Staley, A.L. Kobrinskii, A.M. Goldman, "Ambipolar Gate Effect and Low Temperature Magnetoresistance of Ultrathin $\text{La}_{0.8}\text{Ca}_{0.2}\text{MnO}_3$ Films," *Physical Review Letters* **94**, 037204.
A. Bhattacharya, M. Eblen-Zayas, N.E. Staley, A.L. Kobrinskii, and A.M. Goldman, "Low-temperature glassy response of ultrathin $\text{La}_{0.8}\text{Ca}_{0.2}\text{MnO}_3$ films to electric and magnetic fields," *Physical Review B* **72**, 132406
Kevin A. Parendo, K. H. Sarwa B. Tan, A. Bhattacharya, M. Eblen-Zayas, N. E. Staley, A. M. Goldman, "Electrostatic Tuning of the Superconductor-Insulator Transition in Two Dimensions," *Physical Review Letters* **94**, 197004
- 2004 A. Bhattacharya, M. Eblen-Zayas, N.E. Staley, W.H. Huber, A.M. Goldman, "Micromachined SrTiO_3 single crystals as dielectrics for electrostatic doping of thin films," *Applied Physics Letters* **85**, 997
- 1999 N. Fortune, M. Eblen, S. Uji, H. Aoki, J. Yamada, S. Tanaka, S. Maki, S. Nakatsuji and H. Anzai, "Field dependence of the specific heat and magnetothermal effect for $\alpha\text{-(BEDT-TTF)}_2\text{KHg(SCN)}_4$ in the density wave and high field ground states," *Synthetic Metals* **103**, 2078

Other publications

- 2014 J. Kozminski, N. Beverley, D. Deardorff, R. Dietz, M. Eblen-Zayas, R. Hobbs, H. Lewandowski, S. Lindaas, A. Reagan, R. Tagg, J. Williams, B. Zwickl, "AAPT Recommendations for the Undergraduate Physics Laboratory Curriculum," Report prepared by a subcommittee of AAPT Committee on Laboratories, https://www.aapt.org/Resources/upload/LabGuidelinesDocument_EBendorsed_nov10.pdf
- 2012 M. Eblen-Zayas, "Review: *Reliability in scientific research: Improving the dependability of measurements, calculations, equipment, and software* by I. R. Walker." *MRS Bulletin* **37**, 967 (2012).
- 2005 K.E. Daniels, M. Eblen-Zayas, A. Michelman-Ribeiro, J.M. Valentine, "Research Funding and Women in Physics," Women in Physics: Second IUPAP International Conference on Women in Physics, *AIP Conference Proceedings* **795**, 41
K.S. Budil, K.E. Daniels, T. Daniels-Race, M. Eblen-Zayas, B.K. Hartline, R. Hazeltine, A.K. Hodari, K.R.Horton, R. Ivie, L. Kay, L.J. Martinez-Miranda, A. Michelman-Ribeiro, M. Ong, J.I. Rudati, J. Valentine, B. Whitten, E. Williams, Y.V. Zastavker, "Women in Physics in the US: A Progress Report," Women in Physics: Second IUPAP International Conference on Women in Physics, *AIP Conference Proceedings* **795**, 175

PRESENTATIONS – Curricular Design/Pedagogy/SoTL (* indicates presenter)

- 2021 Facilitated discussion, Melissa Eblen-Zayas*, Laura Muller*, J. Leamon, S. Richard, E. Altermatt, E. Iverson, K. O’Connell, “How faculty support student quantitative skills development in online environments,” National Numeracy Network Conference (online)
- 2020 Innovation/Ideation Session, Melissa Eblen-Zayas*, Laura Muller*, “Supporting student quantitative skills in online environments,” AAC&U Transforming STEM Conference (online)
Contributed poster, M. Eblen-Zayas*, E. Altermatt, L. Muller, J. Leamon, S. Richard, “Supporting student quantitative skills across introductory STEM courses: Faculty approaches and perceived needs,” 1.E2, Physics Education Research Conference (online, paper published in proceedings)
- 2019 Invited talk, “An evolving approach to assessment in upper-level labs,” AAPT Summer Meeting, Provo, UT
- 2018 Invited talk, “Experimental design in curricular labs”, Conference on Laboratory Instruction Beyond the First Year of College (BFY III Conference), Baltimore, MD
Contributed poster, R. Terrien* & M. Eblen-Zayas, “Lessons learned from five years of student self-directed experimental projects in the advanced lab”, BFY III Conference, Baltimore, MD
Panelist (with C. Topaz & E. Stevens), “Teaching online in the liberal arts”, LACOL Workshop, Carleton College
- 2017 Contributed talk, M. Eblen-Zayas* & J. Russell*, “Online in Summer and Face-to-Face in Fall: An Experimental Bridge Course for Quantitative Skills,” Blended Learning in the Liberal Arts Conference, Bryn Mawr College, PA
Invited talk, “Redesigning an advanced lab course to promote experimental design,”
APS March Meeting, New Orleans, LA, B40.00002
Also at University of Minnesota Physics Education Seminar, Minneapolis, MN
Discussion circle (with E. Evans, J. Russell, S. Taylor), “LACOL: A Consortium of Liberal Arts College Experimenting with Online Learning,” EDUCAUSE ELI Annual Meeting, Houston, TX
- 2016 Invited talk, M. Eblen-Zayas* & J. Russell, “A Look into CUBE: Carleton Undergraduate Bridge Experience,” LACOL webinar (online)
Contributed poster, “The impact of metacognitive activities on student attitudes towards experimental physics,”
Physics Education Research Conference, Sacramento, CA (Paper published in proceedings.)
Invited talk, “Designing Lab Experiences that Build Experimental Design Skills,”
AAPT Winter Meeting, New Orleans, LA
Also at Physics Education Research Group, University of Colorado, Boulder (online)
- 2015 LEAP Session, M. Eblen-Zayas*, D. Gross*, & D. Walser-Kuntz*, “Civic Engagement Models to Foster Integrative Science Education,” AAC&U Transforming STEM Education Conference, Seattle, WA
Contributed poster, M. Eblen-Zayas* & M. Larson*, “Making meaningful curricular connections to campus operations and community initiatives,” AASHE Conference, Minneapolis, MN
Contributed poster, “Comparing electronic and traditional lab notebooks in the advanced lab,” Conference on Laboratory Instruction Beyond the First Year of College (BFY II Conference), College Park, MD, (Paper published in proceedings.)
Panelist (with H. Lewandowski & R. Tagg), “Implementing AAPT Recommendations for the Undergraduate Physics Lab,” BFY II Conference, College Park, MD
- 2014 Contributed poster, “Engaging physics majors with academic civic engagement projects,” AAPT Summer Meeting, Minneapolis, MN
Panelist, “Preparing students for quantitative reasoning” LACOL Workshop, Pomona College, Claremont, CA
- 2013 Contributed talk, “Development of a materials science course to serve diverse constituencies,”
ASEE Annual Conference, Atlanta, GA (Paper published in proceedings.)
Invited talk, “Rethinking assessment in upper-level lab courses,”
University of Minnesota Physics Education Seminar, Minneapolis, MN
Also at University of St Thomas Physics Department, St Paul, MN
- 2012 Contributed talk, “Hands-on performance assessments for electronics,” AAPT Summer Meeting, Philadelphia, PA
Contributed poster, “Emphasizing oral communication skills in an upper-level electronics course,” Conference on Laboratory Instruction Beyond the First Year of College, Philadelphia
- 2010 Contributed talk, “Integrating novel writing assignments in intermediate physics courses,” MAAPT/WAPT Fall Meeting, UW River Falls, River Falls, WI
- 2009 Panelist, Discussion of introductory physics labs, MAAPT Fall Meeting, Augsburg College, Minneapolis, MN

- Contributed poster, M. Eblen-Zayas* & D. Luhman*, "Intermediate and Advanced Labs at Carleton College," APS/AAPT Topical Conference on Advanced Labs, Ann Arbor, MI
- Contributed talk, "Applying New Faculty Workshop Lessons Learned to Intermediate-Level Physics Courses", APS March Meeting, Pittsburgh, PA, D29.12
- 2006 Contributed talk, "Small steps towards incorporating nano concepts in the undergraduate physics curriculum," 2nd NCLT Faculty Workshop on Nanoscale Science & Engineering Education, Cal Poly San Luis Obispo, CA
- Contributed talk, "Networking and mentoring women in physics: Local approaches to a universal challenge", MAAAPT Spring meeting, Hamline University, St. Paul, MN

PRESENTATIONS/WORKSHOPS – Faculty Development & Educational Development

(* indicates presenter/facilitator)

- 2020 Online workshop, "Engagement as a crucial element of resilient course design," Trinity College (CT)
- Online workshop, "Resilient course design that fosters engagement and builds community," College of St Benedict/St John's University
- Online workshop series, "Resilient course design: Design your course once for multiple scenarios", "Resilient course design: Building community even in an online environment", "Resilient course design: Assignments, assessment, & feedback", Wesleyan University
- Online workshop, M. Eblen-Zayas*, V. Morse*, D. Steen Fatkin*, "Designing Your Course Once for Multiple Modalities," ACM Online Course Design & Pedagogies Workshop Series
- Invited talk, "Building Community in Online Environments," Claremont Colleges Center for Teaching & Learning webinar
- Online workshop, "Building Community with Students When They're Off Campus - Lessons from Carleton's Online Summer CUBE", LACOL 2020 Virtual Workshop
- Invited talk, "Creating a High-Touch Online Summer Bridge Program," Academic Impressions webinar
- 2019 LACOL QLAB round robin conversations & workshops, M. Eblen-Zayas*, S. Richard*, L. Muller*, and J. Leamon*, programming that included over 75 social science and science faculty at Carleton, Davidson, and Williams Colleges in the development of prototype online modules to support student QS review and practice
- Panelist (with B. Nagel & F. Rogers), "Faculty Development and Student Learning: Sustaining a faculty culture that highly values teaching", COFHE Assembly Meeting, Williams College
- 2018 Contributed poster, Celeste Sharpe*, Sarah Calhoun*, Melissa Eblen-Zayas, Iris Jastram, Kristin Partlo, Janet Russell*, "Perspectives on Connecting SoTL across the (Co-)Curriculum at a Small Liberal Arts College", ISSOTL18, Bergen, Norway
- 2017 Contributed poster, K. O'Connell* & M. Eblen-Zayas, "Making Connections: How a Small Learning and Teaching Center Has a Big Impact", NSEC Conference, New Orleans, LA
- 2015 Workshop, "Communicating physics in and beyond the laboratory," Telling it like it is: Teaching scientists how to communicate effectively, Amherst College, Amherst, MA

PRESENTATIONS – Physics (* indicates presenter; _ indicates Carleton College undergraduate)

- 2021 Invited talk, "Phase inhomogeneity in EuO_{1-x} ", Bard College physics colloquium
- 2020 Invited talk, "Phase inhomogeneity in EuO_{1-x} ", APS Midwest Conference for Undergraduate Women in Physics, University of Minnesota
- 2017 Invited talk, "Correlated electron materials: the fun begins when the models break down", College of St Scholastica School of Sciences Seminar
- Invited talk, "Phase inhomogeneity in EuO_{1-x} ", Williams College physics colloquium
- 2015 Invited talk, "Eu-rich EuO and the manganites: How similar?" Kent State University Physics Department Colloquium, Kent, OH
- 2014 Contributed poster, B. Goodge*, L. Hellwig*, M. Eblen-Zayas, "Transport and magnetoresistance response of EuO_{1-x} films fabricated by two different methods," APS March Meeting, Denver, CO, C1.00080
- 2013 Contributed poster, L. Hellwig*, C. Beckner*, M. Eblen-Zayas, "The colossal magnetoresistance response of EuO_{1-x} thin films," APS March Meeting, Baltimore, MD, V1.00132
- 2011 Contributed poster, B. Colwell*, A. Kinsey*, S. Schlotter*, M. Eblen-Zayas, "Characterization of EuO_{1-x} thin films grown by oxidation of metallic Eu," APS March Meeting, Dallas, TX, K1.193

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- 2010 Contributed talk, S. Schlotter^{*}, T. Brenner, C. Carter, B. Colwell, A. Kinsey, B. Schuster, M. Eblen-Zayas, "Magnetic and transport properties of EuO films fabricated by oxidation of Eu metal films," APS March Meeting, Portland, OR, P37.00002
Contributed poster, M. Eblen-Zayas^{*}, T. Brenner, B. Colwell, C. Carter, B. Schuster, S. Schlotter, "Impact of substrate heating during growth on transport and magnetization response of Eu-rich EuO thin films," Joint MMM/Intermag Conference, Washington, DC, ER-15
- 2009 Invited talk, "Eu-rich EuO as a laboratory for exploring colossal magnetoresistance"
Williams College physics colloquium
Also at Macalester College physics colloquium & St. Olaf College physics colloquium
Invited talk, "Transport and magnetotransport in Eu-rich EuO thin films," University of Minnesota condensed matter seminar
Contributed poster, T. Brenner^{*}, M. Eblen-Zayas, "Growth and characterization of EuO thin films," APS March Meeting, Pittsburgh, PA, K1.129
- 2008 Invited talk, "Eu-rich EuO as a laboratory for exploring colossal magnetoresistance", University of Northern Iowa physics colloquium
Contributed talk, Pinshane Huang^{*}, Tom Brenner^{*}, M. Eblen-Zayas, "Hands-on Green Physics: Making your own biodegradable plastics and dye-sensitized solar cells," MAAAPT Spring Meeting, Macalester College
- 2006 Invited talk, "CMR responses: Nanoscale inhomogeneity and colossal responses"
St. Olaf Physics Colloquium, Northfield, MN
Also at Smith College Physics Lunch, Northampton, MA
Invited talk, "Electrical modulation of colossal magnetoresistive materials" Amherst College Physics Colloquium, Amherst, MA
- 2005 Invited talk, "Low temperature response of ultrathin manganite films in a field-effect geometry"
Argonne National Laboratory Materials Science Division, Argonne, IL
Also at Dartmouth College Quantum/Nanophysics Seminar, Hanover, NH
Contributed poster, M. Eblen-Zayas^{*}, A. Bhattacharya, N.E. Staley, A.L. Kobrinskii, A.M. Goldman, "Low temperature response of ultrathin manganite films in a FET geometry," 2nd IUPAP International Conference on Women in Physics, Rio de Janeiro, Brazil
Contributed talk, M. Eblen-Zayas^{*}, A. Bhattacharya, N.E. Staley, A.L. Kobrinskii, A.M. Goldman, "Glassy response to gate and magnetic fields in ultrathin manganite films," APS March Meeting, Los Angeles, CA, J41.004
- 2004 Invited talk, "Low temperature response of ultrathin manganite films in a field-effect geometry," Materials Physics Branch, Naval Research Labs, Washington, DC
Contributed talk, M. Eblen-Zayas^{*}, A. Bhattacharya, N.E. Staley, A.L. Kobrinskii, A.M. Goldman, "Ultrathin manganites in FET geometry: device fabrication and characterization," APS March Meeting, Montreal, Canada, Y24.002
- 2003 Invited talk, "Electrostatic Modulation of the Superconductor-Insulator Transition", St. Olaf College Physics Department Colloquium
Contributed talk, M. Eblen-Zayas^{*}, A. Bhattacharya, N.E. Staley, "Breakdown studies of single crystal SrTiO₃ and sputtered Al₂O₃," APS March Meeting, Austin, Texas, X25.008
- 1999 Contributed talk, M. Eblen^{*}, N. Fortune, M. Naughton, "Comparative Calorimetric Study of Spin-Density-Wave Transitions in (TMTSF)₂PF₆ and (TMTSF)₂ClO₄" APS Centennial Meeting, Atlanta, Georgia, QC01.05

GRANTS, FELLOWSHIPS, & AWARDS

External

- 2019- National Science Foundation Division of Education IUUSE: "Online modules for quantitative skill building:
2022 Exploring adaption and adoption across a consortium", PI: Melissa Eblen-Zayas, Co-PIs: Sundi Richard, Davidson College, Laura Muller & Jonathan Leamon-Morgan, Williams College, Amount: \$290,940
- 2017- Associated Colleges of the Midwest Hybrid and Online Curricular Resources Grant: "Supporting Student
2018 Quantitative Skills Development across the Curriculum with Qbit Online Modules", Melissa Eblen-Zayas, Nathan Grawe, Deborah Gross, Daniela Kohen, Aaron Swoboda, Amount: \$16,975.
- 2010- National Science Foundation Major Research Instrumentation MRI-R²: "Acquisition of an x-ray diffractometer for
2013 powder and thin film materials characterization", PI: Melissa Eblen-Zayas, Co-PIs: Cam Davidson & Steve Drew, Amount: \$305,000.

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- 2008- National Science Foundation Division of Materials Research RUI: "EuO Thin Films as a Laboratory for Exploring
2013 Metal-Insulator Transitions and Colossal Magnetoresistance", PI: Melissa Eblen-Zayas
Amount: \$144,590.
- 2007- Research Corporation Cottrell College Science Award: "Exploration of possible phase inhomogeneity in EuO thin
2010 films exhibiting a colossal magnetoresistance response"
Amount: \$22,911 with \$10,035 in matching funds.
- 2001- National Science Foundation Graduate Research Fellowship
2004

Institutional

- 2015 Carleton College HHMI Curriculum Development Grant, "Integrating Electronics, Robotics, and Intro Computer
Science", with S. Mohring and D. Musicant
Minnesota Campus Compact Presidents' Civic Engagement Steward Award
- 2014 Broadening the Bridge Grant (Carleton-St Olaf Mellon-funded initiative), "Exploring opportunities for
departmental resonance in physics and astronomy," with B. Borovsky of St. Olaf.
Carleton College Curriculum Innovation Grant, "Combining computation and experimentation to visualize
physical systems," with B. Titus and M. Baylor.
Carleton College HHMI Course Development Grant, "Expanding community partner networks around energy and
materials life cycle issues."
- 2013 Carleton College HHMI Course Development Grant, "Connecting CS and physics through computer
microarchitecture", with S. Goings.
- 2009 Carleton College HHMI Course Development Grant, "Modeling and measuring materials' properties in
introductory physics."
- 2008-09 Carleton College Large Faculty Development Grant – Eugster and Class of '49 Fellowships
2004-05 University of Minnesota Doctoral Dissertation Fellowship
1999-00 University of Minnesota First-year Graduate School Fellowship
1999 Smith College Phi Beta Kappa; Smith College Sigma Xi

PROFESSIONAL COMMUNITY INVOLVEMENT

- Service to American Association of Physics Teachers (AAPT), American Physical Society (APS):*
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| Elected APS/AAPT Member-at-large, APS Forum on Education Executive Committee | 2021-2023 |
| Reviewer, APS/AAPT Effective Practices for Physics Programs (EP3) -- Introductory
Courses for Physical Sciences & Engineers | 2021 |
| Committee for the American Journal of Physics Five-Year Review | 2019-2020 |
| Minnesota AAPT Chapter President | 2016-2018 |
| Minnesota AAPT Chapter Vice-President | 2014-2016 |
| Reviewer, APS & AAPT Joint Task Force on Undergraduate Physics
Programs, <i>Phys21: Preparing Physics Students for 21st Century Careers</i> | 2016 |
| Committee on Laboratories | 2013-2016 |
| Selection Committee, APS Reichert Award for Advanced Lab Instruction | 2013-2014 |
| Minnesota AAPT Chapter Treasurer | 2006-2014 |
| Committee on Graduate Education | 2006-2009 |

External reviewer:

- Physics program/department reviews at Nebraska Wesleyan University (Lincoln, NE),
Wellesley College (Wellesley, MA), Simpson College (Indianola, IA), and
Loyola University (New Orleans, LA)
Reviewer for tenure files at six different liberal arts colleges

Additional professional involvement:

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| Science consulting team, Sherman Fairchild Foundation | 2017-present |
| Organizing Committee, Conference on Laboratory Instruction Beyond the
First Year of College (BFY III) | 2017-2018 |
| Editor, BFY III Conference Proceedings | 2018 |

Organizing Committee, LACOL QS/QR Hack-a-thon	2016-2017
Organizing Committee, Conference on Laboratory Instruction Beyond the First Year of College (BFY II)	2014-2015
Editor, BFY II Conference Proceedings	2015
PKAL Summer Leadership Institute for STEM Faculty	2011
US delegation to 2 nd IUPAP International Conference on Women in Physics	May 2005

INSTITUTIONAL INVOLVEMENT at Carleton College

Administrative roles:

Director, Perlman Center for Learning and Teaching	2016-2020
Department Chair, Physics & Astronomy	2012-2016
Coordinator, Science Fellows Program	2011-2014

College-wide committees:

Future Learning Technology Group	2013-2017
Faculty Personnel Committee	2014-2016
Budget Committee	2010-2012
Budget Committee Representative to Faculty Compensation Committee	2010-2012
Junior Faculty Affairs Committee	2009-2010
Institutional Animal Care and Use Committee	2007-2008
Learning and Teaching Center Advisory Board	2006-2008

Additional campus involvement:

Faculty Working Group: Student Sampling Procedures	2019-2020
Public Works Grant Committee (Mellon-funded grant initiative)	2017-2020
Maker Space Planning Group	2017-2018
Environmental Studies Steering Committee	2015-2018
Civic Engagement Advisory Board	2016-2017
Science Facilities Planning Group	2014-2016
Science and Math Steering Committee (formerly CISMI)	2006-2016
Facilities Master Planning – Science and Math Facilities Subcommittee	2013-2014
Environmental Studies Curriculum Committee	2011-2014
Strategic Planning Working Group: Faculty and Staff Compensation	2011-2012
Clare Booth Luce Scholars Coordinator	2011-2012

Faculty development facilitation:

<i>Workshop organizer/facilitator:</i>	
New Faculty Workshop	2016-2019
Active Learning Spaces Workshop	2019
Effective & Efficient Feedback Workshop	2018
Inclusive Classrooms Faculty Learning Community	2017
<i>Book group facilitator:</i>	
<i>An Inclusive Academy: Achieving Diversity & Excellence</i>	2019
<i>The Distracted Mind: Ancient Brains in a High-Tech World</i>	2019
<i>Everyday Bias: Identifying and Navigating Judgments in our Daily Lives</i>	2017
<i>Over Ten Million Served: Gendered Service in Language and Literature Workplaces</i>	2013
New faculty mentor	2011-2013

Mentoring undergraduate research:

Supervised over 60 different students in Phys 356 Special Projects Research
 Undergraduate summer research students:
 Andrew Maris '19, Alex McMurty '17, Kate Higgins '17, Yuan Shen Li '17, Berit Goodge '16, Luke Hellwig '15, Chiara Beckner '14, Ali Ehlen '13, Colleen Barr '12, Rebecca Riss '12, Sarah Schlotter '12, Catrice Carter '11, Ben Colwell '11, Alex Kinsey '11, Samantha Thompson '11, Anna Zink '11, Elliot Bartis '09, Tom Brenner '09, Lauren Milne '08, Stephanie Vasko '07

PROFESSIONAL MEMBERSHIPS

American Physical Society, American Association of Physics Teachers, Council on Undergraduate Research, POD Network