

Jennifer T. Heath

Reed College Department of Physics
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Education

M.S., Ph.D., Physics, University of Oregon, 2002

Research Advisor: Dr. J. David Cohen

B.A. Cum Laude, Math and Physics, Whitman College, 1995

Research interests

Electronic transport in semiconductors

Nanoparticle/organic composite thermoelectric materials (Au/PEDOT:PSS)

Thin-film photovoltaic materials and devices

2D materials and devices

Scanning Probe Microscopy

Academic positions

Professor, Department of Physics, Reed College, 2022-*present*

Associate Editor, American Journal of Physics, 2026-*present*

Professor, Department of Physics, Linfield University, 2013-2022

Chair, Department of Physics, Linfield University, 2010-2013; 2018-2021

Visiting Research Professor, University of Washington, 2016-2017 (with Dr. David Cobden)

Associate Professor, Linfield College, 2008-2013

Visiting Scientist, National Renewable Energy Laboratory, 2009-2010 (with Mowafak Al-Jassim, Measurements and Characterization group)

Assistant Professor, Linfield College, 2002-2008

Research assistant, University of Oregon Dept. of Physics, 1999-2002 (advisor: Dr. J. David Cohen)

Teaching assistant, University of Oregon Dept. of Physics, 2002; 1998-1999

Department of Education GAANN fellow

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Industry experience

Optics Technician, ETEC Co., 1997

Performed laser and optics quality control inspections. Built optics subassemblies for production.

Columns Technician, FEI Co., 1995-1997

Assembled and tested prototype ion beam focusing columns from engineering drawings.

Troubleshoot columns and testing systems to component level.

External funding

National Science Foundation, “Collaborative Research: RUI: Effects of Interfacial Properties on Charge Transport in Conducting Organic/Inorganic Composites.” DMR-2226593, \$265,767, Oct. 2022-Aug 2027. [collaborators funded separately-- N. Coates and W. Paige Hall, U. Portland, \$396,694].

The M. J. Murdock Charitable trust, “Start-up research package for new position in physics.” \$36,000. Aug. 2022-Aug. 2025. [Note that the physics department applied for this funding on my behalf; I’m now responsible for outcomes and reports.]

National Science Foundation, “MRI: Acquisition of an atomic force microscope for multidisciplinary research and undergraduate education.” DMR-1827971. \$180,677, Sept. 2018-April 2021. (with co-PI’s M. Crosser, E. O. Atkinson, M. L. Bestwick, Linfield University)

The M.J. Murdock Charitable Trust, “Two-dimensional devices: potential barriers and screening.” \$59,950, February 2018-February 2022.

National Science Foundation (Research Opportunity Award for NSF EFRI 2-DARE award 1433496): Spin-Valley Coupling for Photonic and Spintronic Devices. ROA Project Title: Carrier dynamics and spin transport in spin-valley coupled materials and devices. \$102,874, August 2016-July 2017. (add-on award to an NSF grant for D. H. Cobden)

American Physical Society, Travel funding to the professional skills development workshop, \$450, February 2012.

National Renewable Energy Laboratory, Travel funding to support sabbatical research with the measurements and characterization group, \$11,000, August 2009-May 2010; January 2011.

American Chemical Society Petroleum Research Fund, “Effect of grain boundary type on sub-bandgap defects in polycrystalline silicon films,” Undergraduate Faculty Sabbatical, \$32,851, August 2009-May 2010.

consulting services for the photovoltaics industry (conducted through the Linfield Research Institute), summer 2012; summer 2007.

National Renewable Energy Laboratory, “Identifying the electronic properties relevant to improving the performance of high band-gap copper based I-III-VI₂ chalcopyrite thin film photovoltaic devices,” secondary subcontract through J. D. Cohen, U. of Oregon under the “high performance photovoltaics” initiative, \$106,441, April 2004-October 2007.

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Publications

h-index is 12 with 1037 total citations as of June 2026.

Bold = undergraduate student coauthor

W.P. Hall, **T. Bedoya, J. Hoang, J. Weber, D. O' Connor, A. Bains, A. Brill**, N. Coates, and J.T. Heath, "Gold Nanoplate Growth: A Proposed Mechanism that Explains Kinetic and Stoichiometric Phenomena" *in preparation*.

L. Rich, A. Leal, **M. Lopes, J. Moura, L. Barnes**, J.T. Heath, E. Williams, "Lightning Variability over the Three Main Basins in the Americas and its Relation to Climatological Factors," *in preparation*.

1. **Z. Scholl, E. Frohlich, N. Rogers**, P. Nguyen, B. Hase, **J.T. Murphy, J. Toledo-Urena**, D. Cobden, J. T. Heath, "Reducing non-linear effects in Kelvin Probe Force Microscopy of back-gated 2D semiconductors," *Appl. Phys. Lett.* **129**, 013101 (2026).
<https://doi.org/10.1063/5.0323880>
2. **L. Russell, E. A. Rein, A. Piatigorsky**, J. T. Heath, "Measuring optical force with a torsion pendulum: a platform for independent student experimentation," *Am. J. Phys.* **93**, 643–651 (2025). <https://doi.org/10.1119/5.0268585>

The above publication was featured on the journal cover and in a "Scilight": A. Liebendorfer, "Low-cost pendulum rig delivers sensitivities to observe radiation pressure for students," *Scilight* **2025**, 301103 (2025). <https://doi.org/10.1063/10.0037037>
3. J. T. Heath and J. Li, "Ch. 1: Introduction to capacitance spectroscopy in semiconductors," and J. T. Heath, "Ch. 4: Capacitance-Voltage and Drive-Level Capacitance Profiling," in *Capacitance spectroscopy of semiconductors*, edited by J. Li (Pan-Stanford, 2018).
<https://doi.org/10.1201/b22451>
4. J.T. Heath and P.W. Zabierowsky, "Capacitance spectroscopy of thin-film solar cells," in *Advanced Characterization Techniques for Thin-Film Solar Cells, 2nd edition*, edited by D. Abou-Ras, T. Kirchartz, and U. Rau (Wiley, Weinheim Germany, 2016) Ch. 4.
<https://doi.org/10.1002/9783527636280>
5. C.W. Warren, J. Li, C.A. Wolden, D.W. Miller, J.T. Heath, M.C. Lonergan, "The effect of copper on the sub-bandgap density of states of CdTe solar cells," *Appl. Phys. Lett.* **106**, 203903 (2015).
<https://doi.org/10.1063/1.4921577>
6. J.W. Boucher, D.W. Miller, C.W. Warren, J.D. Cohen, B.E. McCandles, J.T. Heath, M.C. Lonergan, S.W. Boettcher, "Optical response of deep defects as revealed by transient photocapacitance and photocurrent spectroscopy in CdTe/CdS solar cells," *Sol. En. Mat. and Sol. Cells* **129**, 57 (2014). <https://doi.org/10.1016/j.solmat.2014.02.024>
7. C. W. Warren, D. W. Miller, F. Yasin, and J. T. Heath, "Characterization of Bulk Defect Response in Cu(In,Ga)Se₂ Thin-Film Solar Cell using DLTS," *Proceedings of the 39th IEEE Photovoltaic Specialists conference*, (IEEE, Tampa, 2013).]
<https://doi.org/10.1109/PVSC.2013.6744122>
8. J.T. Heath, C. –S. Jiang, and M.M. Al-Jassim, "Measurement of semiconductor surface potential using the scanning electron microscope," *J. Appl. Phys.* **111**, 046103 (2012).
<https://doi.org/10.1063/1.3684556>

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9. C. -S. Jiang, J.T. Heath, H.R. Moutinho, and M.M. Al-Jassim, "Scanning Capacitance Spectroscopy on n^+ -p asymmetrical Junctions in Multicrystalline Si Solar Cells," *J. Appl. Phys* **110**, 014514, (2011). <https://doi.org/10.1063/1.3605507>
10. J.T. Heath and P.W. Zabierowsky, "Capacitance spectroscopy of thin-film solar cells," in *Advanced Characterization Techniques for Thin-Film Solar Cells*, edited by D. Abou-Ras, T. Kirchartz, and U. Rau (Wiley, Weinheim Germany, 2011) Ch. 4. <https://doi.org/10.1002/9783527699025.ch4>
11. J.T. Heath, C.-S. Jiang, and M.M. Al-Jassim, "Imaging the solar cell pn junction and depletion region using secondary electron contrast," *Proceedings of the 37th IEEE Photovoltaic Specialists conference*, (IEEE, Seattle, 2011).] <https://doi.org/10.1109/PVSC.2011.6186274>
12. C.-S. Jiang, J.T. Heath, H.R. Moutinho, J.V. Li, and M.M. Al-Jassim, "Nanoelectrical characterizations of n^+ -p asymmetrical junctions using atomic force microscopy-based electrical techniques with nanometer resolution," *Proceedings of the 37th IEEE PVSC*, (IEEE, Seattle, 2011). <https://doi.org/10.1109/PVSC.2011.6186340>
13. J.T. Heath, C.-S. Jiang, and M.M. Al-Jassim, "Diffused junctions in multicrystalline silicon solar cells studied by complementary scanning probe microscopy and scanning electron microscopy techniques," *Proceedings of the 35th IEEE PVSC* (IEEE, Honolulu, 2010). <https://doi.org/10.1109/PVSC.2010.5614484>
14. J.T. Heath, C. -S. Jiang, H. R. Moutinho, and M. M. Al-Jassim, "Investigation of charge trapping at grain boundaries in polycrystalline and multicrystalline silicon solar cells," *Proceedings of the Materials Research Society*, **1268** (MRS, San Francisco, 2010). <https://doi.org/10.1557/proc-1268-ee07-10>
15. **J.J. Rembold, T.W. Curtis**, J.T. Heath, D.L. Young, S.W. Johnston and W.N. Shafarman, "Electronic defects and device performance in CuGaSe₂ solar cells," *Thin-Film Compound Semiconductor Photovoltaics—2007*, edited by T. Gessert, K. Durose, C. Heske, S. Marsillac, T. Wada, (Cambridge University Press, New York, 2007). <https://doi.org/10.1557/proc-1012-y12-27>
16. J.D. Cohen, J.T. Heath and W.N. Shafarman, "Photocapacitance spectroscopy in the copper indium diselenide alloys" in *Wide-Gap Chalcopyrites; Springer Series in Materials Science Vol. 86*, S. Siebentritt, U. Rau, eds. (Springer-Verlag, Berlin, 2006) p. 69-90. https://doi.org/10.1007/3-540-31293-5_5
17. J.W. Lee, J.T. Heath, J.D. Cohen, and W.N. Shafarman, "Role of bulk defect states in limiting CIGS device properties," in *Proceedings of the 14th World Conference on Photovoltaic Energy Conversion* (IEEE, Hawaii, 2006). <https://doi.org/10.1109/WCPEC.2006.279464>
18. P.K. Johnson, J.T. Heath, J.D. Cohen, K. Ramanathan, and J.R. Sites, "A comparative study of defect states in selenized and evaporated CIGS(S) solar cells," *Prog. Photov.* **13**, 1 (2005). <https://doi.org/10.1002/ppp.619>
19. J. Lee, J.T. Heath, J.D. Cohen, and W.N. Shafarman, "Detailed study of metastable effects in the Cu(InGa)Se₂ alloys: Test of defect creation models," *Mat.Res.Soc. Symp. Proc.* **865**, 373 (2005). (Data collected by **J.J. Rembold** and **T.W. Curtis** was included in this publication.) <https://doi.org/10.1557/proc-865-f12.4>
20. J.T. Heath, J.D. Cohen, and W.N. Shafarman, "The study of bulk and metastable defects in Copper Indium Gallium Diselenide using drive level capacitance profiling," *J. Appl. Phys.* **95**, 1000 (2004). <https://doi.org/10.1063/1.1633982>

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21. J.T. Heath, J.D. Cohen, and W.N. Shafarman, "Distinguishing metastable changes in bulk CIGS defect densities from interface effects," *Thin Solid Films* **431-432**, 426 (2003).
[https://doi.org/10.1016/S0040-6090\(03\)00189-5](https://doi.org/10.1016/S0040-6090(03)00189-5)
22. A. Rockett, D. Liao, J. T. Heath, J. D. Cohen, Y. M. Strzhemechny, L. J. Brillson, K. Ramanathan, and W. N. Shafarman, "Near-surface defect distributions in Cu(In,Ga)Se₂," *Thin Solid Films* **431-432**, 301 (2003). [https://doi.org/10.1016/S0040-6090\(03\)00148-2](https://doi.org/10.1016/S0040-6090(03)00148-2)
23. J. T. Heath, J. D. Cohen, and W.N. Shafarman, "Defects in Copper Indium Aluminum Diselenide Films and their Impact on Photovoltaic Device Performance," *Mat. Res. Soc. Symp.* **763**, 441 (2003). <https://doi.org/10.1557/proc-763-b9.2>
24. J. D. Cohen, J. T. Heath, and W. N. Shafarman, "New Junction Capacitance Methods for the Study of Defect Distributions and Carrier Properties in the Copper Indium Diselenide Alloys," *Mat. Res. Soc. Symp.* **763**, 429 (2003). <https://doi.org/10.1557/proc-763-b9.1>
25. J.T. Heath, J.D. Cohen, W.N. Shafarman, D.X. Liao, and A.A. Rockett, "Effect of Ga content on defect states and minority carrier mobility in CuIn_{1-x}Ga_xSe₂ photovoltaic devices," *Appl. Phys. Lett.* **80**, 4540 (2002). <https://doi.org/10.1063/1.1485301>
26. J.T. Heath, J.D. Cohen, and W.N. Shafarman, "Correlation between deep defect states and device parameters in CuIn_{1-x}Ga_xSe₂ photovoltaic devices," in *Proceedings of the 29th IEEE Photovoltaic Specialists Conference*, (IEEE, New Orleans, 2002) p. 596.
<https://ieeexplore.ieee.org/xpl/conhome/8468/proceeding>
27. J.D. Cohen, J.T. Heath, K.C. Palnigini, J.C. Yang, and S. Guha, "Insights into the mechanisms of light-induced degradation from studies of defects in low Ge fraction a-Si,Ge:H alloys," *J. Non-Crys. Solids* **299A**, 449 (2002). [https://doi.org/10.1016/S0022-3093\(01\)01172-3](https://doi.org/10.1016/S0022-3093(01)01172-3)
28. J.T. Heath, J.D. Cohen, W.N. Shafarman, and D.C. Johnson, "Characterization of deep defects in CuIn_{1-x}Ga_xSe₂ (CIGS) working photovoltaic devices," in *Photovoltaics for the 21st Century II*, R.D. McConnell and V.K Kapur, eds., The Electrochemical Society, Inc., New Jersey (2001) 324.
[ISBN 1-56677-316-4](https://doi.org/10.1016/S0022-3093(01)01172-3)
29. J.T. Heath, J.J. Gutierrez J.J., J.D. Cohen, G. Ganguly, "Effect of increasing growth rates on film properties and device performance for DC glow discharge amorphous silicon," *Mats. Res. Soc. Symp. Proc.* **715**, 553 (2002). <https://doi.org/10.1557/proc-715-a13.2>
30. J.D. Cohen, J.T. Heath, K.C. Palinginis, J.C. Yang, and S. Guha, "Light-induced annealing of deep defects in low Ge fraction a-Si,Ge:H Alloys: further insights into the fundamentals of light-induced degradation," *Mats. Res. Soc. Symp. Proc.* **664**, A12.5.1 (2001).
<https://doi.org/10.1557/proc-664-a12.5>
31. J.T. Heath, S.B. Iyer, Y. Lubianiker, J.D. Cohen, and G. Ganguly, "Correlation between film and cell properties for DC plasma deposited amorphous silicon," *Mats. Res. Soc. Symp. Proc.* **664**, A25.3.1 (2001). <https://doi.org/10.1557/proc-664-a25.3.1>

Invited presentations and workshops

"Mapping the energy landscape: scanning probe microscopy of 2D devices," Meeting of the American Physical Society Northwest Section, June 2026 (*plenary presentation*).

"Oscillating systems in physics: two examples," Portland State University, April 2025.

"Mapping the energy landscape in electronic devices," Lewis and Clark College, March 2025.

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“Mapping the energy landscape,” Reed College Faculty Showcase, March 2025.

“Imaging electronic properties of 2D devices using Kelvin Probe Force Microscopy,” Reed College, November 2021.

“Directly imaging electronic properties with the Scanning Electron Microscope,” Reed College, December 2012.

“Understanding the electronic properties of solar cell materials,” New Mexico Institute of Technology, April 2010.

“Peering into the heart of a solar cell,” Four Corners section of the American Physical Society, Weber State University, Ogden, UT, October 2010 (*plenary presentation*).

“Peering into the heart of a solar cell,” Willamette University, October 2010.

“Good defect, bad defect: electronic properties of CuGaSe₂ solar cells,” Ninth annual meeting of the Northwest section of the American Physical Society, Pocatello, ID, May 2007 (*plenary presentation*).

“Capacitance Measurements,” Young scientist’s tutorial on characterization techniques for thin film solar cells, Materials Research Society spring meeting, San Francisco, April 2007 (*workshop*).

J. T. Heath, “Materials research in photovoltaics: CuIn_xGa_{1-x}Se₂,” Reed College, September 2005; Whitman College, April 2005; Lewis and Clark College, February 2003.

J. T. Heath, “Admittance Techniques,” Young Scientists Tutorial on characterization techniques for thin film solar cells, Materials Research Society spring meeting, San Francisco, March 2005 (*workshop*).

Conference presentations (since 2015)

*presenter listed first; only external presentations by me or by my research students are listed undergraduate students in **bold***

1. **Z. Scholl, E. Frolich, R. Coles, N. Rogers**, B. Hase, P. Nguyen, D. Cobden, J. T. Heath, “Band gap and work function characterization of back-gated 2D TMDCs using KPFM,” 26th annual meeting of the American Physical Society Northwest section, Klamath Falls, June 2026 (poster).
2. J.T. Heath, **Z. Scholl, E. Frolich, N. Rogers**, B. Hase, P. Nguyen, D. Cobden, “Measuring 2D semiconductors with Kelvin Probe Force Microscopy: caution and success,” American Physical Society global physics summit, Denver CO, March 2026 (oral).
3. **Z. Scholl**, J. T. Heath, “Visualizing 2D semiconductor heterojunctions using Kelvin probe force microscopy,” American Physical Society global physics summit, Denver CO, March 2026 (poster) (presentation award winner).
4. **E. Frohlich, N. Rogers**, J.T. Heath, “FarFETched science: electrical response in 2D field effect transistors,” Murdock Trust Undergraduate Conference, Vancouver WA, November 2025 (poster).
5. **R. Jalal, J. F. Odell**, N. Coates, P. Hall, J. T. Heath, “Electric transport in organic conductive polymer-inorganic nanocomposites,” American Physical Society global physics summit, Anaheim CA, March 2025 (poster) (presentation award winner).
6. **J. F. Odell, R. Jalal**, N. Coates, P. Hall, J. T. Heath, “Transition between semiconducting and metallic behavior in PEDOT:PSS composites,” American Physical Society global physics summit, Anaheim CA, March 2025 (poster).

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7. **N. Rogers**, J. T. Heath, “Exfoliating and Characterizing mm-Size 2D MoS₂ films,” American Physical Society March Meeting, Minneapolis, MN, March 2024 (Oral) (presentation award winner).
8. **R. Jalal, P. S. Oli**, J. T. Heath, “Temperature and Frequency-Dependent Electric Response in Conductive Polymer Composite” American Physical Society March Meeting, Minneapolis, MN, March 2024 (Oral).
9. **P. Oli, R. Jalal, A. Schaeffer**, J. Heath, “Scanning probe microscopy of nanoparticle-polymer composites.” Murdock Trust Undergraduate Conference, Vancouver WA, November 2023 (poster).
10. **A. Schaeffer**, J. Heath, **N. Warren, A. Hyslop**, N. Coates, and P. Hall, “Investigating Structure and Conductivity in a PEDOT:PSS and Au System” American Physical Society March Meeting, Las Vegas, NV, March 2023 (oral presentation).
11. **B. Panchumarthi**, “Dielectric response of bulk h-BN” American Physical Society March Meeting, Las Vegas, NV, March 2023 (poster).
12. **J. Murphy, J. Toledo-Urena, A. Landry**, and J. T. Heath, “Characterizing the electronic properties of 2D devices using KPFM,” Murdock Trust Undergraduate Conference, Vancouver WA, November 2021 (poster).
13. **A. Landry, J. Murphy**, and J. T. Heath, “Current-Voltage profiling of a graphene-on-gold contact with the Cypher AFM,” Murdock Trust Undergraduate Conference, Vancouver WA, November 2021 (poster).
14. **J. Toledo-Urena, J. Murphy, B. Greenlee, W. Shannon**, and J. T. Heath, “Building 2-dimensional devices,” Murdock Trust Undergraduate Conference, Vancouver WA, November 2018 (poster); American Physical Society March Meeting, Boston MA, March 2019 (poster) (*accepted but canceled due to COVID-19).
15. **F. McKay**, M. Seitz, M. Adams, P. Nguyen, B. Dzyubenko, J. T. Heath, D. Cobden, “Scalable Growth and Characterization of Monolayer WSe₂” American Physical Society March Meeting, New Orleans LA, March 2017 (oral presentation).
16. **T. Cox, A. Ogle**, and J. T. Heath, “Capacitance of thin film solar cells: Violating the depletion approximation” American Physical Society March Meeting, Baltimore MD, March 2016 (oral presentation).
17. **A. Ogle, T. Cox**, and J. T. Heath, “Frequency and voltage dependence of series resistance in a solar cell” American Physical Society March Meeting, Baltimore MD, March 2016. Also presented at the Murdock Trust Undergraduate Conference (Vancouver WA, October 2015). (poster)
18. J. T. Heath, C. Reinke, M. Crosser, A. Kruchten, “Engaging undergraduates in interdisciplinary science during a pre-orientation camp” American Physical Society March Meeting, San Antonio TX, March 2015.

Research and senior thesis students mentored

Reed College

1. Rosa Coles (Physics, '27) summer 2026-present.
2. David O'Connor (Physics, '29) spring 2026-present.
3. Ezra Frolich (Physics '28) summer 2025-present.

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4. Zeke Rein (Physics '27) 2023-present.
5. Zander Scholl (Physics '26) 2023-2026. Senior thesis, "*Know your potential: Electrostatic gating of 2D semiconductors examined with Kelvin Probe Force Microscopy.*"
6. Jesse Mitchell-Reiss (Physics '27) spring 2026.
7. Mateo Admire (Physics '26) summer 2025.
8. Leo Barnes (Physics '25) senior thesis, "*Thunderstorms, Linearity, and Climate Change: An Analysis of the Relationships Between Temperature, Precipitation, and Lightning in the Americas from 2018-2024.*"
9. Adam Friedland (Physics '25) senior thesis, "*Studying the Potential for Kelvin Probe Force Microscopy on Polymer Surfaces with Embedded Nanostructures.*"
10. Rubayat Jalal (Physics '26) 2023-2025.
11. Leland Russell (Mathematics-Statistics '27) 2023-2025.
12. Natalie Rogers (Physics, '24) 2023-2024; post-baccalaureate researcher 2025. Senior thesis, "*Illuminating MoS₂: Characterizing mm-Size Exfoliated 2D MoS₂ for Electroluminescence*".
13. Joaquin Fernandez Odell (Physics '25) summer 2024.
14. Noah Miller (Physics '26) summer 2024.
15. Teddie Stewart (Physics, '24) senior thesis, "*Characterizing electrical properties of 2D and 3D materials as Field-Effect Transistors.*"
16. Hope Palmer (Physics, '24) senior thesis, "*That's Hot! Heat Loss at the Reed Research Reactor.*"
17. Anatalya Piatigorsky (Physics, '24) senior thesis, "*Experiments in Photon Propulsion: A Lab-Based Investigation into the Mechanism Behind Solar Sailing.*"
18. Pratik Oli (Physics, '26), summer 2023-2024.
19. Daniel Collier (Physics, '25) summer 2023.
20. Leo Yang (Physics, '26) summer 2023.
21. Amelia Schaeffer (Physics-Chemistry '23), senior thesis: "*Striking Gold: An Atomic Force Microscopy Study of Gold Nanoparticle-Polymer Interfaces.*"
22. Bhavana Panchumarthi (Physics, '23), senior thesis: "*Dielectric Response of Bulk hBN.*"

Linfield University

1. Joseph Murphy (Physics, '22) 2019-2022; senior thesis 2022.
2. Joel Toledo-Urena (Physics, '20) 2018-2021; senior thesis 2020.
3. Alex Landry (Physics, '22) 2020-2021.
4. Becky Smith (Physics, '21) 2019-2020.
5. Samantha Hawkins (Biochemistry, '21) fall 2019.
6. Joseph Simpson (Mathematics, '20) summer 2019.
7. Morgan Chamberlain (Physics, '20) fall 2019.
8. William Shannon (Physics, '19) 2018-2019; Senior thesis 2019.

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9. Byron Greenlee (Applied Physics, '19) summer 2018; Senior thesis 2019.
10. Alex Ogle (Physics, '16) 2015-2016; Senior thesis 2016.
11. Thaddeus Cox (Physics, '16) 2014- 2016; Senior thesis 2016.
12. Justin Davis (Physics, '15) 2013-2015. Senior thesis 2015.
13. Addison Wisthoff (Physics, '14) 2013.
14. James Harger (Applied Physics '16) 2013.
15. Emily Van Doozer, Summer 2011.
16. Kathleen O'Brien (Physics, '11) 2010- 2011; Senior thesis 2011.
17. Joel Pentecost (Physics, '10) 2009- 2010; Senior thesis 2010.
18. Josh Lovell (Physics, '10) 2009-2010; Senior thesis 2010.
19. Jeff Baker (Physics, '09) 2007- 2009; Senior thesis 2009.
20. Andrew Sharp (Physics, '08) 2007-2008. Senior thesis 2008.
21. Todd Curtis (Physics, '07) 2004-2007. Senior thesis 2007.
22. Jed Rembold (Physics, '07) 2004-2007. Senior thesis 2007.
23. Zachary Billey (Physics, '07) Summer 2006.
24. Taylor Streng (Applied Physics, '06) 2005-2006. Senior thesis 2006.

Workshops and training (attended) since 2022

The Python Laboratory workshop (July 2026), American Physics Laboratory Association, with John Essick.

CTL workshops: Orals boards (April 2023), Reading evaluations (February 2023), Syllabus exchange (January 2023), Digital accessibility: Moodle (Spring 2025), Dig. access.: documents (Spring 2025).

New faculty orientation workshop series (fall 2022-spring 2024).

New advisor workshop series (fall 2023-spring 2024).

CTL reads: Bell Hooks (Spring 2023), Remembering and Forgetting in the age of Technology (Fall 2023)

Supporting neurodivergent students in the classroom, facilitated by Paloma Casteleiro Costa, Georgia Tech. January 2023.

Trauma-informed pedagogy workshop with Dr. Mays Imad, Connecticut College (Nov 8, 2023) and follow-up CTL reading/discussion (Feb 28, 2024) on mental health and student learning.

Service to the profession

Executive board, American Laboratory Physics Association (ALPHA) (2025-present).

External reviewer- Physics program, departmental review: Whitman College (2022), Willamette University (2025). Review of promotion file: Bard College (full professor, 2025).

Grant proposal review: National Science Foundation grant proposal review for DMR Electronic and Photonic materials (2023); DMR NSF-MRI (2019, 2020).

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Journal peer review: Journal of Applied Physics, Applied Physics Letters, Applied Physics Materials, Thin Solid Films, Solid-State Electronics, American Journal of Physics.

Executive Committee (Vice-chair, Chair-elect, Chair, Past-chair), American Physical Society Northwest section (NWAPS), 2008-2013.

Nominations committee chair, NWAPS, 2011-2013.

Organizing committee, NWAPS annual meeting, 2009-2011:

2010 meeting, Whitman College, program committee chair.

2011 meeting, Oregon State University, conference chair.

Abstract selection and sorting committee, IEEE Photovoltaic Specialists Conference, June 2012 and June 2011.

Session chair, IEEE Photovoltaic Specialists Conference, June 2011 and June 2010.

Nominations committee, Topical group on energy research and applications, American Physical Society, 2010-2011.

Academic service and outreach, Reed College

Combined degrees program committee; advisor for 3-2 engineering programs (2024-*present*)

Sustainability committee (2026-*present*)

Math preparedness ad-hoc committee (2026-*present*)

Fellowships and Awards committee (2023-2026)

Organize summer research student activities (hikes, bouldering, ice cream, etc.) (2023-*present*).

Math tenure-track search committee (2 positions) (fall 2024)

Open Days, "Microscopy of Materials," Nov. 4, 2023 (14 attendees).

Admissions and Financial Aid committee (2022-2023)

Academic service, Linfield University

Chair, Division of Natural Sciences and Mathematics (2020-2022)

Chair, Physics department (2010-2013; 2018-2022)

Society of Physics Students advisor (2004-2009, 2013-2022)

College Planning and Budgeting Council, science division representative (2017-2020)

Freshman Colloquium Advisor (2003, 2004, 2005, 2008, 2012, 2014, 2017, 2020)

Presidential Transition Team (2018)

Director, PLACE program (2015-2016); associate director (2014-2015).

President's Advisory Committee on the Environment and Sustainability. (2008-2011 and 2013-2015; chair, Curriculum focus group, 2014).

Chair, Strategic planning working group: intercampus relations (2011-2012)

Combined Planning and Budget committee (2010-2011)

*Jennifer T. Heath
August 2026*

Planning Council (2008-2009)

Admissions Committee (2004-2008; Chair 2006-2008)

Jennifer T. Heath
August 2026