Earth and Environmental Systems Institute 314 Earth and Engineering Sciences Building Penn State University University Park, PA 16802-6813 helgeson@psu.edu Google Scholar PhilPapers website

Casey Helgeson

research

philosophy of science values in science climate risk research co-design

appointments

Penn State University

BS, mathematics

Assistant Research Professor, Earth and Environmental Systems Institute	2017-
Assistant research rolessor, Earth and Environmental Systems institute	
Affiliated Faculty, Rock Ethics Institute	2018-
Affiliate Faculty, Department of Philosophy	2021-
French National Centre for Scientific Research (CNRS)	
Postdoctoral Researcher, GREGHEC joint research laboratory	2016-17
London School of Economics and Political Science	
Postdoctoral Researcher, Centre for Philosophy of Natural and Social Science	2013–16
University of Wisconsin–Madison	
PhD, philosophy	2013
MA, philosophy	2009

peer-reviewed iournal articles

education

- **Helgeson, C.**, Keller, K., Nicholas, R. E., Srikrishnan, V., Cooper, C., Smithwick, E. A. H., and Tuana, N. **2024**. Integrating values to improve the relevance of climate-risk research. *Earth's future* 12 (10), e2022EF003025. DOI: 10.1029/2022EF003025.
- Pollack, A. B., **Helgeson, C.**, Kousky, C., and Keller, K. **2024**. Developing more useful equity measurements for flood-risk management. *Nature Sustainability* 7, 823–832. DOI: 10.1038/s41893-024-01345-3.
- Lucash, M. S., Williams, N. G., Srikrishnan, V., Keller, K., Scheller, R. M., Helgeson, C., Nicholas, R. E., and Smithwick, E. A. H. 2023. Balancing multiple forest management objectives under climate change in central Wisconsin, U.S.A. *Trees, Forests and People* 14 (100460). DOI: 10. 1016/j.tfp.2023.100460.
- **Helgeson, C.**, Nicholas, R. E., Keller, K., Forest, C. E., and Tuana, N. **2022**. Attention to values helps shape convergence research. *Climatic Change* 170 (17). DOI: 10.1007/s10584-021-03274-y.
- **Helgeson, C.**, Srikrishnan, V., Keller, K., and Tuana, N. **2021**. Why simpler computer simulation models can be epistemically better for informing decisions. *Philosophy of Science* 88 (2), 213–233. DOI: 10.1086/711501.
- Keller, K., **Helgeson, C.**, and Srikrishnan, V. **2021**. Climate risk management. *Annual Review of Earth and Planetary Sciences* 49 (1), 95–116. DOI: 10.1146/annurev-earth-080320-055847.
- **Helgeson, C. 2020**. Structuring decisions under deep uncertainty. *Topoi: an international review of philosophy* 39 (2), 257–269. DOI: 10.1007/s11245-018-9584-y.
- Helgeson, C. 2018. Modus Darwin Reconsidered. *The British Journal for the Philosophy of Science* 69 (1), 193–213. DOI: 10.1093/bjps/axw015.
- **Helgeson, C.**, Bradley, R., and Hill, B. **2018**. Combining probability with qualitative degree-of-certainty metrics in assessment. *Climatic Change* 149 (3), 517–525. DOI: 10.1007/s10584-018-2247-6.

1997

- Bradley, R., **Helgeson, C.**, and Hill, B. **2017**. Climate Change Assessments: Confidence, Probability, and Decision. *Philosophy of Science* 84 (3), 500–522. DOI: 10.1086/692145.
- Guillaume, J. H. A., **Helgeson, C.**, Elsawah, S., Jakeman, A. J., and Kummu, M. **2017**. Toward best practice framing of uncertainty in scientific publications: A review of Water Resources Research abstracts. *Water Resources Research* 53 (8), 6744–6762. DOI: 10.1002/2017wr020609.
- **Helgeson, C. 2017**. Pattern as observation: Darwin's 'great facts' of geographical distribution. *European Journal for Philosophy of Science* 7 (2), 337–351. DOI: 10.1007/s13194-016-0164-y.
- Thompson, E., Frigg, R., and **Helgeson, C. 2016**. Expert Judgment for Climate Change Adaptation. *Philosophy of Science* 83 (5), 1110–1121. DOI: 10.1086/687942.
- **Helgeson, C. 2015**. There Is No Asymmetry of Identity Assumptions in the Debate over Selection and Individuals. *Philosophy of Science* 82 (1), 21–31. DOI: 10.1086/679114.
- **Helgeson, C. 2013**. The Confirmational Significance of Agreeing Measurements. *Philosophy of Science* 80 (5), 721–732. DOI: 10.1086/673924.
- **Helgeson, C. 2013**. What Selection Can and Cannot Explain: A Reply to Nanay's Critique of Sober. *Philosophy of Science* 80 (1), 155–159. DOI: 10.1086/668880.
- Barrett, M., Clatterbuck, H., Goldsby, M., **Helgeson, C.**, McLoone, B., Pearce, T., Sober, E., Stern, R., and Weinberger, N. **2012**. Puzzles for ZFEL, McShea and Brandon's zero force evolutionary law. *Biology & Philosophy* 27 (5), 723–735. DOI: 10.1007/s10539-012-9321-7.

preprints & in review

- Cooper, C., Helgeson, C., Troy, C. L. C., Keller, K., and Tuana, N. preprint. What do people care about when managing flood risks? A values-informed mental model approach. DOI: 10.31235/osf.io/wkgjp.
- Helgeson, C., Auermuller, L., Gayle, D. B., Dangendorf, S., Gilmore, E., Keller, K., Kopp, R., Lorenzo-Trueba, J., Lowrie, K., Oppenheimer, M., Parrish, K., Ramenzoni, V., Tuana, N., and Wahl, T. under review at *Earth's Future*. Exploratory scoping of place-based opportunities for convergence research. DOI: 10.31219/osf.io/z5ue4.
- Pollack, A., Santamaria-Aguilar, S., Maduwantha, P., Helgeson, C., Wahl, T., and Keller, K. under review at *PNAS*. Funding rules that promote equity in climate adaptation outcomes. DOI: 10. 31219/osf.io/kvyxr.
- Pollack, A., Campbell, J. E., Condon, M., Cooper, C., Coronese, M., Doss-Gollin, J., Hegde, P., Helgeson, C., Kwakkel, J., Lesk, C., Mankin, J., Mayfield, E., Roth, S., Srikrishnan, V., Tuana, N., and Keller, K. preprint. Peer-reviewed climate change research has a transparency problem. The scientific community needs to do better. DOI: 10.31219/osf.io/29nhv.

chapters

- **Helgeson, C.**, Parker, W., and Tuana, N. **2025**. "How uncertainty interacts with ethical values in climate change research." In: *Uncertainty in Climate Change Research: An Integrated Approach*. Ed. by L. O. Mearns, C. Forest, H. Fowler, R. Lempert, and R. Wilby. Springer.
- Smithwick, E. A. H., Caldwell, C., Klippel, A., Scheller, R. M., Tuana, N., Bird, R. B., Keller, K., Vickers, D., Lucash, M., Nicholas, R. E., Olson, S., Ruckert, K. L., Oyler, J., **Helgeson, C.**, and Huang, J. **2019**. "Learning About Forest Futures Under Climate Change Through Transdisciplinary Collaboration Across Traditional and Western Knowledge Systems." In: *Collaboration Across Boundaries for Social-Ecological Systems Science: Experiences Around the World.* Ed. by S. G. Perz. Cham: Springer International Publishing, pp. 153–184. DOI: 10.1007/978-3-030-13827-1 5.

reports

Iulo, L., Arora, A., Fowler, L., Goldberg, L., Helgeson, C., Keller, K., Nicholas, R. E., Sharma, S., Tebyanian, N., Tuana, N., and Zarekarizi, M. 2020. Establishing priorities for Pennsylvania community flood resilience. Research rep. Penn State Initiative for Resilient Communities. 7 pp. DOI: 10.31235/osf.io/ga4z7.

proceedings

Huang, J., Lucash, M. S., Simpson, M. B., **Helgeson, C.**, and Klippel, A. **2019**. Visualizing Natural Environments from Data in Virtual Reality: Combining Realism and Uncertainty. In: *2019 IEEE Conference on Virtual Reality and 3D User Interfaces (VR)*. IEEE, pp. 1485–1488. DOI: 10. 1109/VR.2019.8797996.

conferences, workshops

- Helgeson, C., Pollack, A., Santamaria-Aguilar, S., Linder-Baptie, Z., Keller, K., and Tuana, N. Dec. 2024. "Convergence Research for Coastal Climate Adaptation: A Case Study in Compounding Challenges for Early-Career Researchers". (poster). American Geophysical Union Fall Meeting. Washington, D.C.
- Pollack, A., **Helgeson, C.**, Kousky, C., and Keller, K. **Dec. 2024**. "Developing more useful equity measurements for flood-risk management". American Geophysical Union Fall Meeting. Washington, D.C.
- Pollack, A., Santamaria-Aguilar, S., Gamage, P. M. M., **Helgeson, C.**, Wahl, T., and Keller, K. **Dec. 2024**. "Funding rules that promote equity in climate adaptation outcomes". (poster). American Geophysical Union Fall Meeting. Washington, D.C.
- Huang, X., Peng, W., Wang, P., Shiwang, J., Smith, S., and Helgeson, C. Dec. 2023. "Effects of model choice and uncertainties on the assessment of pollution and health disparities". (poster). American Geophysical Union Fall Meeting. San Francisco, CA.
- Pollack, A., **Helgeson, C.**, Kousky, C., and Keller, K. **Dec. 2023**. "Transparency on underlying values is needed for useful equity measurements". (poster). American Geophysical Union Fall Meeting. San Francisco, CA.
- Pollack, A., **Helgeson, C.**, Kousky, C., and Keller, K. **Oct. 2023**. "Transparency on underlying values is needed for useful equity measurements". (poster). MultiSector Dynamics Workshop. Davis, CA.
- Pollack, A., **Helgeson, C.**, Kousky, C., and Keller, K. **Oct. 2023**. "Transparency on underlying values is needed for useful equity measurements". (poster). Society of Decision Making Under Deep Uncertainty Annual Meeting. Delft, NL.
- **Helgeson, C. Sept. 2023**. "Climate adaptation and public philosophy". (panelist). Public Philosophy Network Annual Conference. Santa Cruz, CA.
- Cooper, C., **Helgeson, C.**, Keller, K., and Tuana, N. **Dec. 2021**. "What does it take for flood risk analysis to reflect homeowner values?" (poster). American Geophysical Union Fall Meeting. New Orleans, LA.
- Helgeson, C., Nicholas, R. E., Keller, K., Forest, C. E., and Tuana, N. June 2019. "Assessment of a multi-institution, multi-discipline research network". (poster). Sustainability Research Networks Awardees Conference. Alexandria, VA: National Science Foundation.
- **Helgeson, C.**, Srikrishnan, V., Keller, K., and Tuana, N. **Nov. 2018**. "Model simplicity where scientific models inform risk management". (poster). Philosophy of Science Association Biennial Meeting. Seattle, WA.
- **Helgeson, C.** and Hill, B. **May 2017**. "A comparison of approaches to deep uncertainty: Decision theory and decision support". Coping with Uncertainty: Normative Approaches, Current Practice Workshop. Paris, France: École Normale Supérieure.
- **Helgeson, C. Nov. 2016**. "Framing decisions under deep uncertainty". Philosophy of Science Association Biennial Meeting. Atlanta, GA.
- **Helgeson, C. Nov. 2016.** "Two pathways for combining modeling and decision support in climate change adaptation". Society for Decision Making under Deep Uncertainty Annual Meeting. Washington, D.C.
- **Helgeson, C. Oct. 2016**. "Framing decisions under deep uncertainty". New Trends in Rational Choice Theory Conference. Munich, Germany: LMU Munich.

- **Helgeson, C. Oct. 2015**. "Better integrating theory and practice in deep uncertainty decision science". Society for Decision Making Under Deep Uncertainty Annual Meeting. Delft, Netherlands.
- **Helgeson, C. Aug. 2015**. "Likelihood and confidence in the IPCC's uncertainty framework". Congress of Logic, Methodology and Philosophy of Science. Helsinki, Finland.
- **Helgeson, C. July 2015**. "Low confidence in extreme probabilities". British Society for the Philosophy of Science Annual Meeting. Manchester, UK.
- **Helgeson, C. June 2015**. "Decision and climate change assessments". Workshop on Decision Making under Severe Uncertainty. London, UK: London School of Economics.
- **Helgeson, C.**, Bradley, R., and Hill, B. **May 2015**. "Decision and climate change assessments". Workshop on Uncertainty in Climate Science and its Impact on Decision-making. Paris, France: Université Paris-Sorbonne, Paris IV.
- Helgeson, C., Bradley, R., and Hill, B. Mar. 2015. "Decision and climate change assessments". (poster). Understanding Uncertainty in Environmental Modelling Workshop. London, UK: London School of Economics, Centre for the Analysis of Time Series.
- **Helgeson, C. Mar. 2014**. "Modus Darwin reconsidered". Philosophy of Biology in the UK Workshop. Cambridge, UK: Cambridge University.
- **Helgeson, C. July 2013**. "Modus Darwin reconsidered". International Society for the History, Philosophy, and Social Studies of Biology Biennial Meeting. Montpellier, France.
- **Helgeson, C. Mar. 2013**. "Modus Darwin reconsidered". American Philosophical Association Pacific Division Annual Meeting. San Francisco, CA.
- **Helgeson, C. Nov. 2012**. "The confirmational significance of agreeing measurements". Philosophy of Science Association Biennial Meeting. San Diego, CA.
- **Helgeson, C. July 2011**. "Why taxonomize hierarchically?" International Society for the History, Philosophy, and Social Studies of Biology Biennial Meeting. Salt Lake City, UT.
- **Helgeson, C. Apr. 2009**. "Darwin's biogeographical evidence". Celebration of Darwin A Conference on Darwin's *Origin*. Blacksburg, VA.

invited talks

- Department of River-Coastal Science and Engineering, Tulane University. **Nov. 2024**. "Exploratory scoping of place-based opportunities for convergence research". New Orleans, LA.
- Megalopolitan Coastal Transformation Hub Annual Meeting. **May 2024**. Panel on Co-Production: Challenges, Opportunities, and What We Have Learned. Camden, NJ.
- NSF Sight Visit for Megalopolitan Coastal Transformation Hub. **May 2024**. "Research and Intellectual Merit: Transdisciplinary research design". Camden, NJ.
- Climate Change Seminar Series, Cornell University. **Mar. 2024**. "The place of values in climate-risk research". Ithaca, NY. (This talk is cross-lised below under *guest lectures* because it was both a university-wide seminar and a required lecture for an undergraduate course.)
- NSF Coastlines and People Cross-Hub Seminar Series. **Nov. 2023**. "Successes and struggles on the path to convergence research". (with A. Pollack). National Science Foundation. (virtual).
- Paterno Fellows Program Lecture Series, Penn State. **Nov. 2023**. "The place of human values in climate-risk research". State College, PA.
- Penn State Climate Solutions Symposium. **May 2023**. "Stakeholder values in climate risk research". Panel on Change & Risk: Compound Hazards, Integrated Impacts. State Colelge, PA.
- Irving Institute for Energy and Society, Dartmouth College. **Apr. 2023**. "Improving convergence science through managing values". Hanover, NH.
- Megalopolitan Coastal Transformation Hub Annual Meeting. **May 2022**. "Decision analyses as boundary objects to link stakeholders, academic researchers, and decision-makers". (with K. Keller). Rutgers University. (virtual).

- Collaborative Stakeholder Advisory Panel Quarterly Meeting, Megalopolitan Coastal Transformation Hub. **Apr. 2022**. "A process for choosing research problems and partner communities". Rutgers University. (virtual).
- External Advisory Board Semiannual Meeting, Megalopolitan Coastal Transformation Hub. **Apr. 2022**. "A process for choosing research problems and partner communities". (with K. Keller). Rutgers University. (virtual).
- Megalopolitan Coastal Transformation Hub Seminar Series. **Mar. 2022**. "How might decision analyses help communities to manage coastal climate risk?" (with K. Keller). Rutgers University. (virtual).
- Megalopolitan Coastal Transformation Hub Seminar Series. **Nov. 2021**. "Values-informed mental models". (with N. Tuana and K. Keller). Rutgers University. (virtual).
- Department of Philosophy, Durham University. **Mar. 2021**. "Why simpler computer simulation models can be epistemically better for informing decisions". Durham, UK. (virtual).
- Susquehanna River Basin Commission. **Oct. 2020**. "Flood resilience in riverine communities: Understanding risk and facilitating values-informed decision making". (with L. Fowler, L. Iulo, N. Tebyanian, K. Keller, S. Sharma, and S. Leininger). (virtual).
- Department of Philosophy, University of South Carolina. **Feb. 2020**. "Why simpler computer simulation models can be epistemically better for informing decisions". Columbia, SC.
- Society for Decision Making under Deep Uncertainty Annual Meeting. **Nov. 2019**. "Where are the values in your analysis?" Plenary session. Delft, NL.
- Susquehanna River Symposium. **Oct. 2019**. "Penn State Initiative for Resilient Communities: A pilot to develop community-based solutions to riverine flooding". Keynote address. (with L. Iulo and R. Nicholas). Lewisburg, PA: Bucknell University.
- NSF Sustainability Research Networks Awardees Conference. **June 2019**. "Value preferences and scientific knowledge". Panel on Social Science Research and Policy Engagement. Alexandria, VA: National Science Foundation.
- Rock Ethics Institute Seminar Series, Penn State. **Mar. 2018**. "Responsible framing of uncertainties in scientific publications". State College, PA.
- Center for Climate Risk Management Seminar Series, Penn State. **Jan. 2018**. "Value judgements within scientific practice". State College, PA.
- Models to Decisions: Decision Making Under Uncertainty Annual Conference. **July 2017**. "Informing decisions with models: Contributions from philosophy". Exeter, UK.
- Institute of History and Philosophy of Sciences and Technology, Université Paris 1 Panthéon-Sorbonne CNRS. **Nov. 2016**. "Decision and climate change assessments". Paris, FR.
- Evidence Amalgamation Workshop, Durham University. **Nov. 2015**. "Treatment of uncertainties by the Intergovernmental Panel on Climate Change". Durham, UK.
- Evidence and Expertise Workshop, University of Helsinki. **Oct. 2015**. "Expert judgment for climate change adaptation planning". Helsinki, FL.
- Managing Severe Uncertainty Seminar Series, LSE. **May 2015**. "Expert judgment for climate change adaptation planning". London, UK.
- Managing Severe Uncertainty Seminar Series, LSE. **Nov. 2014**. "Climate change uncertainties and expert elicitation". London, UK.
- Centre for Philosophy of Natural and Social Science, LSE. **Jan. 2013**. "The confirmational significance of agreeing measurements". London, UK.
- Department of Philosophy, Washington University in St. Louis. **Dec. 2012**. "Pattern as observation: Darwin's geographical distribution argument". St. Louis, MO.
- Department of Philosophy, University of Wisconsin–Madison. **Nov. 2012**. "Pattern as observation: Darwin's geographical distribution argument". Madison, WI.

Center for Logic and Philosophy of Science, Tillburg University. **Oct. 2010**. "Darwin's biogeographical evidence". Tilburg, NL.

teaching Penn State

GEOSCI 597 – Climatic Change: Past, Present, and Possible Futures. Primary Instructor. Fall 2021. PHIL 110 – Introduction to Philosophy of Science. Primary Instructor. Fall 2019.

London School of Economics

PH 404/213 - Scientific Revolutions. Primary Instructor. Fall 2014.

University of Wisconsin-Madison

PHILOS 210 - Reason in Communication. Primary Instructor. Fall 2009.

PHILOS 101 - Introduction to Philosophy. Teaching Assistant. Fall 2006.

PHILOS 210 - Reason in Communication. Teaching Assistant. Spring 2006.

PHILOS 211 – Elementary Logic. Teaching Assistant. Fall 2005.

Guest lectures

BEE 2000 - Perspectives on the Climate Change Challenge (Cornell University) Spring 2024.

ENGS 172 - Climate Change and Engineering. ×2 (Dartmouth College) Spring 2024.

ENGS 7.02 - Climate Change. ×2 (Dartmouth College) Spring 2024.

34:970:631 - Communicating Science with Decision Makers. (Rutgers University) Spring 2024.

34:970:631 - Communicating Science with Decision Makers. (Rutgers University) Spring 2022.

GEOSC 450 - Risk Analysis in the Earth Sciences. (Penn State) Fall 2020.

EARTH 400 – Earth Science and Policy. (Penn State) Spring 2020.

Other teaching

Instructor. Climate Risk Management Summer Fest. (Dartmouth College) Summer 2023. Instructor / Supervisor. Summer Research Experience for Undergraduates Program. (Sustain-

able Development Institute, College of Menominee Nation.) Summer 2018.

Secondary School

Mathematics Teacher. Britannica International School. Budapest, Hungary. 2001–2003.

grants and contracts

Co-Principal Investigator, Penn State Subaward of the *Megalopolitan Coastal Transformation Hub*. PI: Robert Kopp. NSF, \$981,900, (total: \$19,900,000). 2021–2026.

Principal Investigator, *Climate and Sustainability Ethics Initiative*. Rock Ethics Institute (Penn State), \$75,500 (cumulative). 2019–2025.

projects and networks

Megalopolitan Coastal Transformation Hub. Team Co-Lead. PI: Robert Kopp. NSF. 2021–2026. Penn State Initiative for Resilient Communities. Participant. PI: Lisa Iulo. Office of the Provost (Penn State). 2019–2022.

Visualizing Forest Futures. Participant. PI: Erica Smithwick. NSF. 2018–2021.

Network for Sustainable Climate Risk Management. Participant. PI: Klaus Keller. NSF. 2012–2017.

Decision-Making & Belief Change Under Severe Uncertainty: A Confidence-Based Approach. Participant. PI: Brian Hill. National Research Agency (France). 2015–2018.

Managing Severe Uncertainty. Participant. PI: Richard Bradley. Arts and Humanities Research Council (UK). 2013–2016.

professional service

Session Chair. Philosophy of Science Association Biennial Meeting. New Orleans, LA. Nov. 2024.

Co-Convener & Session Chair. Session: Climate Adaptation and Public Philosophy. Public Philosophy Network Annual Conference. Santa Cruz, CA. Sep. 2023.

Co-Organizer. Workshop: Improving State-level Energy Decisions to Address Air Quality, Health, and Equity Goals. Washington, D.C. Sep. 2023.

Co-Organizer. Climate Risk Management Summer Fest. Dartmouth College. Aug. 2023.

Session Chair. ×2 Philosophy of Science Association Biennial Meeting. Pittsburgh, PA. Nov. 2022.

Lead Organizer & Moderator. Science and Values in Climate Risk Management Webinar Series. Center for Climate Risk Management (Penn State). 2019–2020.

Co-Convener & Session Chair. Session: Incorporating Values in Modeling and Decision Analyses. Society for Decision Making under Deep Uncertainty Annual Meeting. Delft, NL. Nov. 2019.

Guest Editor. The Reasoner, Volume 11, Number 7. July, 2017.

Lead Organizer. Coping with Severe Uncertainty Workshop. HEC Paris. May 2017.

Session Chair. Philosophy of Biology at Madison (POB@M) Workshop. UW-Madison. May 2016.

Lead Organizer. Decision Making under Severe Uncertainty Workshop. LSE. June 2015.

Lead Organizer. Managing Severe Uncertainty Seminar Series. LSE. 2013-2016

Organizing Committee. Philosophy of Biology at Madison Workshop. UW-Madison. June 2012.

Organizing Committee. Philosophy of Biology at Madison Workshop. UW-Madison. May 2010.

Organizing Committee. Formal Epistemology Workshop. UW-Madison. May 2008.

institutional service

Committee Member. Advisory Committee to the Director of the Earth and Environmental Systems Institute (Penn State). 2020–present.

Committee Member. Rock Ethics Institute Steering Committee (Penn State). 2019–present. Committee Member. Committee implementing the Good Practice Scheme of the Society for Women in Philosophy. Department of Philosophy, Logic, and Scientific Method (LSE). 2014–2015.

additional education

Summer School on Sustainable Climate Risk Management, Penn State. Summer 2017.

Advanced Study Summer Colloquium, National Center for Atmospheric Research. Summer 2014.

Complex Systems Summer School, Santa Fe Institute. Summer 2009.

fellowships and awards

Marcus and Blanche Singer Graduate Fellowship (UW-Madison). 2012.

Holtz Center for Science and Technology Studies (UW-Madison) Travel Grant. 2011

Visiting Fellowship, Tilburg Center for Logic and Philosophy of Science. Fall 2010.

UW-Madison Graduate School Travel Grant. 2009.

Pittsburgh Center for Philosophy of Science Travel Grant. 2009

Pittsburgh Center for Philosophy of Science Travel Grant. 2007.

National Science Foundation Graduate Research Fellowship. 2007.