

Kristin Hoch

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EDUCATION

PhD Student **August 2023 - Present**
University of Maryland - Neuroscience and Cognitive Science (NACS)

- Graduate Assistant in the Language Development and Perception Laboratory
- Advisor: Dr. Rochelle Newman
- Research interests:
 - Development of linguistic representations
 - Phonetic category learning
 - Predictive processing in language comprehension

Non-degree coursework **August 2020 - May 2023**
University of Maryland & University of New Mexico

- Coursework in psycholinguistics, cognitive science and statistics

Bachelor of Arts, Liberal Arts **Graduated May 2016**
St. John's College, Santa Fe, NM

- Interdisciplinary curriculum in philosophy, language, literature, history, mathematics, and science, with a focus on reading and discussion of original texts
- Liberal Arts degree equivalent to:
 - Double major in Philosophy and History of Mathematics and Science
 - Double minor in Classical Studies and Comparative Literature
- GPA: 3.96

- Senior thesis: *Remaking the Cosmos: Time, Space, and Thought Experiments in Einstein's Physics*

PRIOR RESEARCH EXPERIENCE

Post Bachelors Student **September 2018 - August 2020**
Los Alamos National Laboratory - E3SM (Energy Exascale Earth System Model)

- Researched climate dynamics using the Department of Energy's computational earth system model (E3SM)
- Authored on a paper on the effects of grid size and regularity on Gulf Stream dynamics in computational ocean models
- Presented research at conferences, workshops, and project-wide E3SM meetings

**Summer Student
Los Alamos National Laboratory - XTD-IDA**

Summers of 2015, 2016 & 2018

Summer 2018

- Collaborated on a video submission for a supercomputing conference on the formation of water in the early universe

Summer 2016

- Wrote a manual for future students that covered topics in cosmology, and how to run, analyze and visualize cosmology simulations

Summer 2015

- Ran simulations of galaxy formation in two models, focusing on their divergent behavior

AWARDS

T32 Training Fellowship **August 2024**
Comparative and Evolutionary Biology of Hearing (CEBH)

Graduate School Dean's Fellowships **April 2023**

Faculty Award for Sustained Academic Excellence **May 2016**
Awarded by St. John's College

Ariel Internship Award **Summer 2015 & 2016**
Funding provided through St. John's College for summer research internship at Los Alamos National Laboratory

PUBLICATIONS & CONFERENCE PRESENTATIONS

- Hoch, K. E., Petersen, M. R., Brus, S. R., Engwirda, D., Roberts, A. F., Rosa, K. L., Wolfram, P. J. (2020). MPAS-Ocean simulation quality for variable-resolution North American coastal meshes. *Journal of Advances in Modeling Earth Systems*, 12, e2019MS001848. <https://doi.org/10.1029/2019MS001848>
- Hoch, K. E., Petersen, M. R., Brus, S. R., Engwirda, D., Roberts, A. F., Rosa, K. L., Wolfram, P. J. (2020, February 20). *MPAS-Ocean Simulation Quality for Variable-Resolution North American Coastal Meshes*. [Conference Poster]. Ocean Sciences Conference, San Diego, CA.
- Hoch, K. E., Petersen, M. R., Brus, S. R., Engwirda, D., Roberts, A. F., Rosa, K. L., Wolfram, P. J. (2019, September 26). *MPAS-Ocean Simulation Quality for Variable-Resolution North American Coastal Meshes* [Conference presentation]. IMUM (International workshop on Multi-scale Unstructured mesh numerical Modeling for coastal, shelf, and global ocean dynamics), Santa Fe, NM.
- Hoch, K. E., Petersen, M. R., Brus, S. R., Engwirda, D., Roberts, A. F., Rosa, K. L., Wolfram, P. J. (2019, March 20). *Variable-Resolution Mesh Characterization for North American Coastal Simulations with MPAS-Ocean* [Conference presentation]. E3SM All Hands Meeting, Denver, CO.
- Smidt, J., Wiggins, B., Samsel, F., Hoch, K., Abram, G., Jones, S., Gagliano, A., Taylor, M. (2018, November). *The First Water in the Universe* [Conference video], Supercomputing, Dallas, TX.

TEACHING AND MENTORING

Tutor **October 2021 - August 2023**
C2 Education, Bethesda, MD

- Tutored students in first through twelfth grade in literacy, mathematics, English, history and science with a focus on SAT/ACT prep and AP/IB coursework

Tutor **March 2017 - May 2018**
A+ Academic Coaching, Santa Fe, NM

- Tutored students from fourth grade through college in math, English, and science
- Prepared and taught daily math and science lessons to home schooled fourth grade students

Tutor **January 2014 - May 2017**
Breakthrough Santa Fe, Santa Fe, NM

- Provided mentoring and tutoring for middle and high school students who will be the first in their family to attend college

Lab Assistant **August 2015 - May 2016**
St. John's College, Santa Fe, NM

- Prepared, demonstrated and taught all of the laboratory work for a senior laboratory class in physics (electromagnetism and atomic physics) and biology (genetics and ecology)
- Collaborated with faculty members, students, laboratory assistants and the laboratory director to maintain laboratory space, develop lessons and prepare experiments

SERVICE

Graduate Student Board Member **August 2024 - Present**
Language Science Center **University of Maryland**

Planning Committee **2024**
Organized a visiting day for prospective graduate students

TECHNOLOGY SKILLS

- Programming languages: R, Python, FORTRAN
- Computing: High Performance Computing, Linux