David G. Behery

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EDUCATION

Harvard University, Cambridge, MA — July 2025 – July 2027
Research Scholar Initiative with Kempner

University of Illinois at Chicago, Chicago, IL — Aug 2023 – May 2025
Major: B.S. Psychology Minor: Mathematics
**Summa Cum Laude*

Canterbury Christ Church University, Canterbury, UK — Jan 2023 – Apr 2023
Harper College, Palatine, IL — Aug 2022 – Apr 2023

RESEARCH EXPERIENCE

Post-Baccalaureate Scholar, CCNLab – Dr. Sam Gershman/Dr. Tomer Ullman Jul 2025 – Present
Kempner Institute at Harvard University, Allston/Cambridge, MA

- Led an fMRI study testing whether the dorsal/ventral visual stream split corresponds to a "physics engine" vs. "graphics engine" split – designed the stimuli and block-design experiment, ran participants in the scanner, and preprocessed and analyzed the resulting data.
- Tested whether object-oriented interaction networks are a better candidate model of DMFC activity than RNNs trained on the same task – trained interaction network architectures and compared their representations to neural data using representational similarity analysis (RSA) to evaluate model fit.
- Investigated potential computations of the brain's Language Network (LN) – passeed sentences through transformer models and computed information-theoretic metrics to compare to univariate brain responses of equivalent sentences.

Research Assistant, Keinath Lab – Dr. Alex Keinath Aug 2023 – May 2025
University of Illinois at Chicago, Chicago, IL

- Worked on two projects using in-person virtual reality to test hypotheses about the representational similarity between mouse brain function and human behavior during spatial memory and navigation.
- Ran in-person VR behavioral studies with human subjects, analyzed the behavioral data, and fit computational models to test for measurable individual differences in head-direction/navigational behavior.

PROFESSIONAL EXPERIENCE

Kempner Editorial Board Member Jul 2025 – Present
Kempner Institute at Harvard University, Allston/Cambridge, MA

TEACHING & MENTORSHIP

Teaching Assistant – STAT 101/381/361 Jan 2025 – May 2025
University of Illinois at Chicago, Chicago, IL

- Graded students' written assignments and R code.
- Supported students in understanding statistical concepts and statistical computing.

Research Mentor to Tom Bielen – Visiting Research Fellow Fall 2026
Harvard University, Cambridge, MA

PUBLICATIONS

Behery, D.G., Green, D.M., Klimczyk, V.H., Pigin, M., Keinath, A.T., Rotating visual spaces induce behavioral biases consistent with recalibrated heading integration in humans, *iScience* (2025), doi: https://doi.org/10.1016/j.isci.2025.113602

Green, D.M., **Behery, D.G.**, Barrett, R.E., Klimczyk, V.H., Pigin, M., Pecirno, S.A., Keinath, A.T., Change-resistance distinguishes the representational geometries of human spatial memory and mouse CA1 in deformed environments, *bioRxiv preprint* (2025), doi: https://doi.org/10.1101/2025.07.09.663962

AWARDS

- **Chancellor Undergraduate Research Award X4**, UIC — Aug 2023 – Jan 2025
- **Distinguished Trustee Scholar Award (1/40 students)**, Harper College — Aug 2022
- **Psi Chi International Honor Society in Psychology** — Oct 2024
- **Dean's List**, UIC — Spring 2023 – Jan 2025