THOMAS M. GAUL

(501) 605 3043 ⋄ tgaul@iu.edu

EDUCATION

Indiana University Bloomington, Bloomington, IN   *2021 - 2025*
B.S. in Cognitive Science
Minor in Microbiology

- Major concentration in Computation
- Departmental Honors in Cognitive Science
- Dean's List

PUBLICATIONS

1. **Gaul, T. M.** (2024). Autopoiesis in RealLife Euclidean automata. In *ALIFE 2024: Proceedings of the 2024 Artifical Life Conference.* To appear.

2. Beer, R. D., McShaffrey, C., and **Gaul, T. M.** (2024). Deriving the intrinsic viability constraint of an emergent individual from first principles. In *ALIFE 2024: Proceedings of the 2024 Artifical Life Conference.* To appear.

In Review:

1. **Gaul, T. M.** and Izquierdo, E. J. (2024). Cognitive distinctions as a language for cognitive science: Comparing methods of description in a model of referential communication. Submitted to *Artificial Life*.

HONORS AND AWARDS

Murray Austin Goldstone Scholarship, *Indiana University Cognitive Science.*   *June 2024*

Outstanding Contribution Award, *Indiana University Cognitive Science.*   *April 2024*

**Robert J. Glushko Award for Outstanding Research in
Cognitive Science**, *Indiana University Cognitive Science.*   *April 2023*

EXPERIENCE

Midwest Undergraduate Cognitive Science Conference   *Fall 2023 - Spring 2025*
Organizer

· Doing outreach to improve attendance over the previous year
· Managing finances to ensure secure funding

Students of Cognitive Science   *Spring 2024 - Spring 2025*
Treasurer

· Purchasing necessary materials for every meeting to improve attendee experience
· Managing account funds to ensure continued financial support

Academic Fairness Committee   *Fall 2023*
Committee Member

· Sat in hearings and voted to ensure academic integrity and fairness

PRESENTATIONS

1. **Gaul, T. M.** "The biology and cognition of emergent individuals in RealLife Euclidean automata." *Sixteenth Annual Midwest Undergraduate Cognitive Science Conference.* Indiana University Bloomington, IN, 2024.

2. **Gaul, T. M.** "Communication and embedded autonomy: a minimal model of referential communication." *Fifteenth Annual Midwest Undergraduate Cognitive Science Conference.* Indiana University Bloomington, IN, 2023.

SKILLS AND INTERESTS

- **Languages**: C++, Python, Wolfram Language, Java, Bash

- **Software**: Linux, Mathematica, LaTeX, Inkscape, Adobe Illustrator, Matplotlib, NumPy

- **Mathematics**: Dynamical Systems Theory, Linear Algebra, Vector Calculus

- **Areas of Interest**: Theoretical Biology, Autopoiesis, Viability, Cognitive Science, Evolutionary Robotics, Philosophy of Science