

**FEATURED SPEAKER**

**FALL 2025**



**GOODMAN CAMPBELL**  
BRAIN AND SPINE

# ***SEMINAR FOR NEUROTRAUMA AND DISEASES***

**PRESENTS**

***A CONCEPTUAL ECOLOGY OF THE ENGRAM: USING  
PHILOSOPHICAL TOOLS AT THE INTERSECTION OF  
NEUROSCIENCE AND MEMORY***

**Date:** November 12, 2025

**Time:** 4:00 PM-5:00 PM EDT

**Location:** DLR 131

## **ABSTRACT**

Contemporary neurobiology of memory is experiencing an “engram renaissance” (Josselyn, Kohler, & Frankland, 2017). Engram is a new word for an old idea—the current scientific term for the memory trace, an idea as old as thinking about memory itself. While Socrates characterized memory traces as impressions in wax, the engram is understood to be a neural mechanism that supports the retention of information and experience. While many neuroscientists have long assumed that there was an engram, it is only recently, with the advent of tools like optogenetics, that researchers have been able to tag, track, and manipulate specific engrams. Engram is thus something of a comeback concept, arguably far more popular now than at any point since its inception more than a century ago. As this research renaissance continues, the relationship between the engram as a contemporary object of inquiry and the historical engram idea from which it emerged is increasingly strained. How should current work on the engram—and its relation to older ideas about memory traces as well as newer ones about neural representation and the connectome—be understood? To explore this question, I use Griffiths & Stotz’s (2008) conceptual ecology approach to conceptual change in science. This provides a way to identify distinct research niches, each of which operates with its own understanding of the engram. This ecological framework offers a way of identifying new research questions, as well as the relation between the contemporary engram and broader theories of memory and its significance.



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Sarah Robins is Professor of Philosophy at Purdue University, and co-director of the newly established Cognition, Agency, and Intelligence Center (**CAIC**). Her research focuses on memory, exploring questions that arise about this capacity at the intersections of philosophy, neuroscience, and psychology. She is also the creator and lead editor of ***The Memory Palace***, a Substack research blog for philosophy of memory.

She often collaborates with psychologists and neuroscientists in workshops, research projects, and publications. Robins current work is structured around an NSF **Mid-Career Award** (2024-2027) through which she is working on concepts of the memory trace, or engram, in contemporary neurobiology.