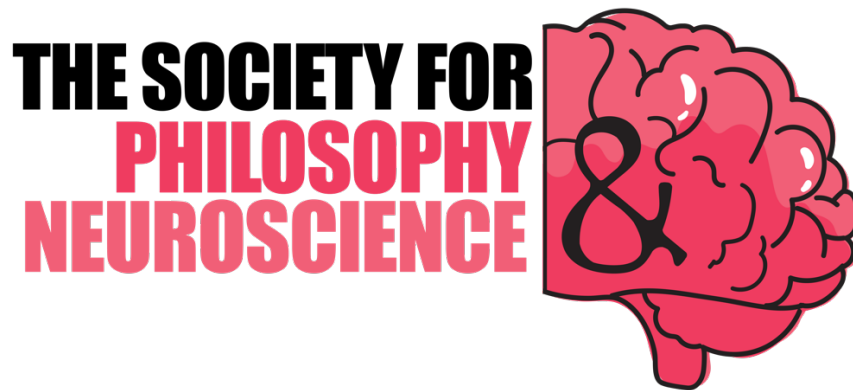


The 1st Annual Meeting of
The Society for Philosophy and Neuroscience



Washington University in St. Louis

St. Louis, MO
May 1 – May 3, 2025

The first meeting of the society is sponsored by the WashU Philosophy-Psychology-Neuroscience Department (PNP) with support from the Department of Psychological & Brain Sciences.

Table of Contents

Table of Contents	2
Acknowledgments	2
SPAN Information	3
Conference Room Locations	4
Meal Planning Information	5
Session Information	6
Poster Session Participants	7
Abbreviated Program	8-9
Detailed Program	10-17

Conference registration is located in the foyer of Umrath Lounge. You may pick up your nametag starting at 7:30am on Thursday, May 1.

Conference attendees must register for SPAN2025 by April 30th, 2025.
Registration information can be found here: philandneuro.com/conference-registration

Acknowledgments:

We would like to thank the following individuals and groups at WashU for helping to make SPAN2025 possible:

Casey O’Callaghan (Director, Philosophy-Neuroscience-Psychology)
Jeffrey M. Zacks (Chair, Department of Psychological & Brain Sciences)
Jason Gardner (Philosophy-Neuroscience-Psychology Advisor)
Jessica Gibson (Academic & Administrative Coordinator, Philosophy Department)
The Undergraduate Philosophy-Neuroscience-Psychology volunteers

SPAN Steering Committee

Danielle J. Williams (chair), Washington University in St. Louis
John Bickle, Mississippi State University & University of Mississippi Medical Center
David Barack, University of Pennsylvania & Lingnan University
Luiz Pessoa, University of Maryland
Corey J. Maley, Purdue University

SPAN2025 Program Committee

Caitlin Mace, University of Pittsburgh
Nina Van Rooy, Duke University
Evan Sommers, Washington University in St. Louis
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John Bickle, Mississippi State University & University of Mississippi Medical Center
Corey Maley, Purdue University
David Barack, University of Pennsylvania & Lingnan University
Luiz Pessoa, University of Maryland

About the Society for Philosophy and Neuroscience (SPAN)

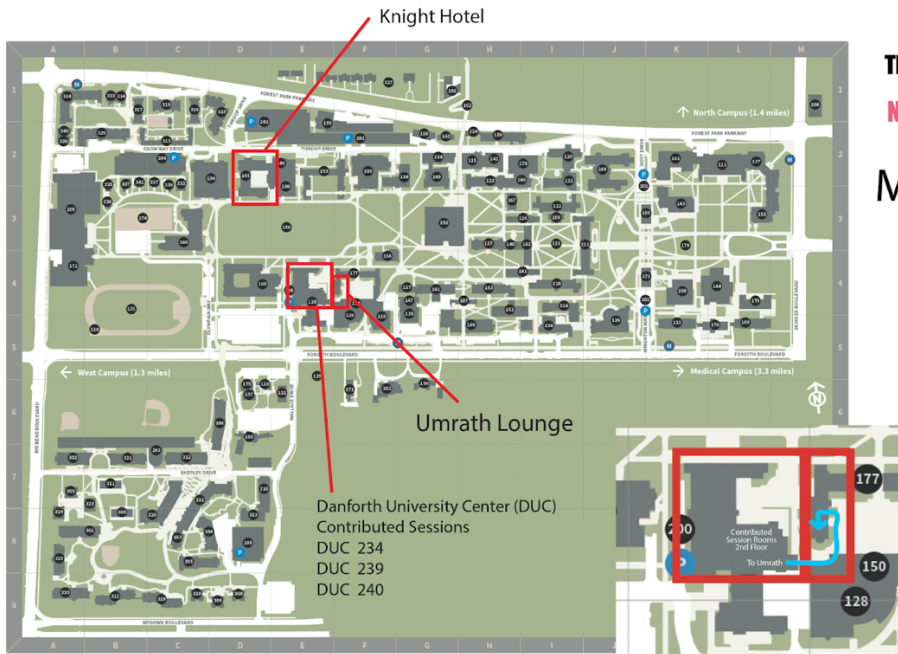
SPAN was founded in 2024. Its purpose is dedicated to providing a forum for collaborations between philosophers and neuroscientists. To encourage collaboration and fruitful discussion between disciplines, the conference is held jointly, featuring sessions that include both philosophers of neuroscience and neuroscientists.

We aim to further this mission with THE FEEDBACK. The Feedback is a blog that shares new work from both philosophers of neuroscience and neuroscientists, accompanied by a commentary from the author. We encourage readers to engage with the paper and commentary in the comments section of the post.

philandneuro.com
thefeedback.blog

**THE FEEDBACK** **BY SPAN**
THEFEEDBACK.BLOG

Conference & Room Locations



MAY 1-3, 2025



DUC Contributed Session Rooms Second floor

FLOOR TWO



Meal Planning

All meal resources are located at the Danforth University Center Dining Hall, located on the 1st Floor of the Danforth University Center, unless otherwise noted. There is a **microwave** located on the first floor of the Danforth University Center near the food service area.

Thursday Lunch Break: 12:30pm-1:30pm

Kalamata (Mediterranean Inspired Cuisine)
1853 Diner (Grill Favorites)
Taqueria (Mexican-Inspired Cuisine)
Neapolitan (Salad Bar & Pizzas)
Simple Servings (Allergen friendly meal of the day)
Café Bergson (Coffee, smoothies, grab & go)
Subway (Mallinckrodt Center- across from Umrath Lounge)

Friday Lunch Break: 2:30pm-3:15pm

Subway (Mallinckrodt Center- across from Umrath Lounge)
Closed at 3pm:
Kalamata (Mediterranean Inspired Cuisine)
Taqueria (Mexican-Inspired Cuisine)
Neapolitan (Salad Bar & Pizzas)
Closed at 7pm:
1853 Diner (Grill Favorites)
Simple Servings (Allergen friendly meal of the day)
Café Bergson (Coffee, smoothies, grab & go)

Saturday Lunch Break: 12:30pm-1:30pm

Subway (Mallinckrodt Center- across from Umrath Lounge)
Closed at 2pm:
Corner 17 at Whispers Café (Located in Olin Library outside the DUC)
Closed at 3pm:
Café Bergson (Coffee, smoothies, grab & go)



Vending machines located on level 1 of the DUC.

Snack will be served during the coffee break (including gluten free and allergen friendly options)

Session Information

For Participants:

Invited Sessions (Excluding the Book Symposium):

Session length: 3 hours

Each speaker is allotted 45 minutes

The talk should be about 25-30 minutes with 15-20 minutes for Q&A.

If the talk runs short, the remaining time will be dedicated to Q&A.

The session chair will manage the queue for Q&A.

Please do not go over time.

Poster Session:

Set-Up: Thursday, May 1st between 1:30pm and 4pm

Tear Down: 8:30pm immediately after the session

Foam board backing and an easel will be provided.

Please note your poster number on pg. 7 to find your location at the session.

For additional information, please see: philandneuro.com/poster-session-resources

Contributed Sessions:

Each paper presentation runs for 30 minutes.

The talk should be 20-25 minutes leaving 5-10 minutes for Q&A.

If the presentation runs short, any remaining time will be dedicated to Q&A.

The session chair will manage the queue for Q&A.

Please do not go over time.

Session Chairs:

Introduce each speaker by name and talk title before each talk.

Keep time for the speaker, indicating when they have 10, 5, and 1-minute left.

Time-keeping signage will be provided in each room.

Maintain a queue for Q&A. You may employ whatever strategy works best.

For Audience members:

Please keep your question brief.

In order to accommodate as many questions as possible, follow-up questions and comments should be saved for after the session.

Poster Session

Thursday, May 1st at
7pm – 8:30pm
Location: Umrath Lounge

1. Consideration of the Existence of Free Will in Neuroscience
Pujarini Das (Indian Institute of Technology Kanpur)
2. An Adaptive View of Perceptual Illusions
Tomy Ames (Washington University in St. Louis)
3. Rethinking Dimensions of Individual Variation in Mental Imagery
Michael Payton (University of Wisconsin-Madison)
Douglas Wadle (Rochester Institute of Technology)
4. Representing Non-Consciously: How We Perceive Content of Which We are Unaware
Emma Karn (Fordham University)
5. What the Frog's Eye Tells the Epistemologist
Jiusi Guo (University of Illinois)
Jonathan Livengood (University of Illinois)
6. On Making the Ontological Leap from Brain to Mind: Neuropsychological Deep Structure Theory
Oliver Boxell (University of Rochester)
7. What is Successful Vision?
Andrew Ramirez (Washington University in St. Louis)
8. The function of memory as an information bottleneck
Matheus Diesel Werberich (Washington University in St. Louis)
9. Creative Transitions
Andrea Rivadulla-Duró (University of Barcelona)
10. Large Language Models' Potential for Philosophical Reason
Christopher Pham (University of Minnesota – Twin Cities)
11. Teaching Philosophy in Science: From Framework to Practice
Alessandra Nicoletta Cruz Yu (Mount Sinai - New York)
Qi Xiu Fu (Icahn School of Medicine at Mount Sinai)
Daniela Schiller (Mount Sinai - New York)

SPAN2025 Abbreviated Program

Thursday, May 1st

8:00am-9am:	Keynote: John Krakauer (Johns Hopkins University)
9am-9:30am:	Coffee & Snacks Break
9:30am-12:30pm:	Invited Symposium: Information Seeking
12:30pm-1:30pm:	Lunch Break
1:30pm-3:30pm:	Contributed Sessions: <ol style="list-style-type: none">1. Consciousness (Round 1)2. Neural Functions3. Perception
3:30pm-4pm:	Coffee Break
4pm-6pm:	Contributed Session: <ol style="list-style-type: none">1A. Memory (½ Session)1B. Affective Neuroscience (½ Session)2. Modeling in Neuroscience
4pm-6:30pm:	Sponsored Session: Deep South Neuroscience & Philosophy Workgroup
4pm-7pm:	What can we learn about current neuroscience practice from its history?
7pm-8:30pm:	Poster Session
	Reception: Cocktails and Hors d'Oeuvres

Friday, May 2nd

8am-11am:	Invited Symposium: Deflating Mental Representation (Umrath Lounge)
11am-11:30am:	Coffee & Snacks Break
11:30am-1:30pm:	Contributed Sessions <ol style="list-style-type: none">1. Neuroscience, Psychiatry, & Emotion2. Tools & Theory Development3. Explanation
11:30am-2:00pm:	Sponsored Session: Neural Mechanisms Online (In person/ Zoom)
11:30am-2:30pm:	Plasticity and/or Supramodality: Philosophical Implications
2:30pm-3:15pm:	Lunch Break
3:15pm-5:15pm:	Contributed Sessions: <ol style="list-style-type: none">1. The Relation between Affect and Cognition in the Human Affectome: Same, Different, Integrated, or Emergent?2. Theory3. Control, Interoception, & Introspection
5:15pm-5:30pm:	Coffee & Snacks Break (15 minutes)
5:30pm-8:30pm:	Invited Symposium: Understanding Brain Function (Umrath Lounge)

Saturday, May 3rd

8am-9am:	Keynote: Mazviita Chirimuuta (The University of Edinburgh)
9am-9:30am:	Snacks & Coffee Break
9:30am-12:30pm:	Invited Symposium: Computation, Explanation, & Neuroscience
12:30pm-1:30pm:	Lunch Break
1:30pm-3:30pm:	Contributed Sessions: <ol style="list-style-type: none">1. Topics on Reduction & Emergence2. Functional Localization

1:30pm-4:30pm: Sponsored Session: Philosophy of Memory Organization
The Philosophy and Neuroscience of Memory Traces

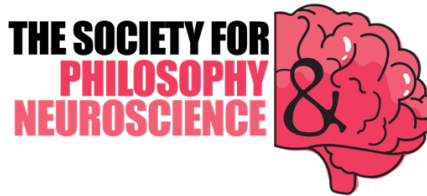
4:30pm-5pm: Snacks & Coffee Break

5pm-7pm: Contributed Sessions

1. Consciousness (Round 2)
2. Mental Representations
3. Attention & Decision Making

7:30pm-9:30pm: SPAN Address & Banquet
Cocktails, Dinner, & Speakers

SPAN2025 Detailed Program



Thursday, May 1st

- 8:00am-9am: Keynote: John Krakauer (Johns Hopkins University)- Umrath Lounge
Mindcraft: Thinking versus intelligence
Introduction: Danielle Williams (Washington University in St. Louis)
- 9am-9:30am: Coffee & Snacks Break - Umrath Lounge
- 9:30am-12:30pm: Invited Symposium: Information Seeking - Umrath Lounge
Chair: Russell Poldrack (Stanford University)
Ilya Monosov (Washington University in St. Louis)
Title: TBA
Tali Sharot (University College London)
The Value of Information
Jennifer Bussell (Columbia University)
The desire to know: representations of the intrinsic value of information in mouse orbitofrontal cortex
Tony Chemero (University of Cincinnati)
Ecological Information and Processing
- 12:30pm-1:30pm: Lunch Break
- 1:30pm-3pm: Contributed Sessions:
1. Neural Functions – DUC 234
Chair: Nicolás Hinrichs (Max Planck Institute for Human Cognitive and Brain Sciences & Okinawa Institute of Science and Technology)
Characterizing neural function in ecological neuroscience
Matthieu de Wit (Muhlenberg College)

On Contextualism About Functions
Caitlin Mace (University of Pittsburgh)

Function Pluralism in Cognitive Neuroscience and Why it Matters
Joseph McCaffrey (University of Nebraska at Omaha)
- 1:30pm-3:30pm: 2. Consciousness (Round 1) – DUC 240
Chair: Nina Van Rooy (Duke University)
Cephalopod Phenomenology and Nautoloid Zombies
David Sorensen (Rutgers)

A Plausible Illusionism?
David Pitt (California State University, Los Angeles)

The Thick Present: Autooensis and Embodiment
Rami Gabriel (Columbia College Chicago)

Qualia as an emergent property of neural computation
Elizabeth A. Stoll (Western Institute for Advanced Studies)

3. Perception – DUC 239

Chair: Luis H. Favela (Indiana University, Bloomington)

A principled model of uncertainty resolution explains dynamic effects of expectations in perceptual decision making

Ari Khoudary (University of California, Irvine)

Representing Relevance

Aaron Glasser (University of Michigan)

Parasitic Perceptual Content and Multimodal Associative Learning

Niccolo Nanni (University of Turin)

Perceptual Metacognition, Memory, and Self-Consciousness

Dezhi Luo (University of Michigan)

3:30pm-4pm: Coffee Break – Near DUC 234

4pm-5pm: Contributed Sessions: DUC 240

1. Memory & Affective Neuroscience (½ Session)

Chair: Nicolás Hinrichs (Max Planck Institute for Human Cognitive and Brain Sciences & Okinawa Institute of Science and Technology)

A program for finding forgetting

Gregory Johnson (Mississippi State University)

Predicting the passions: predictive processing and the riddle of emotional recalcitrance

Alexander Cilliers (University of Western Australia)

4pm-5:30pm: 2. Modeling in Neuroscience – DUC 239

Chair: Ari Khoudary (University of California, Irvine)

Model Networks

David Barack (Lingnan University & University of Pennsylvania)

Metabolic considerations for cognitive modeling

David Colaco (University of Pittsburgh)

Artificial possibilities

Bojana Grujicic (Humboldt-Universität zu Berlin, Technical University Berlin, Max Planck School of Cognition)

4pm-7pm: Sponsored Session: Deep South Neuroscience & Philosophy Workgroup:

What can we learn about current neuroscience practice from its history? – DUC 234

Does the establishment of a novel sense require neurobiological evidence?

Brian Keeley (Pitzer College)

The history of neuroscience is really just one chapter in the history of ecology

Charles Bakker (University of Western Ontario)

The philosophical richness of the history of neuroscience

Ken Aizawa (Rutgers University, Newark)

Correlation as a substitute for causality: How fMRI has reinforced correlation-based storytelling and in the process the cerebellum has replaced 42 as the answer to everything

Jim Bower (Numedea, Inc.)

Killing neuroscience's zombie ideas: The case of the neurotrophic (numerical matching) hypothesis

John Bickle (Mississippi State University & Mississippi Medical Center)

Robert Williams (University of Tennessee)

7pm-8:30pm:

Poster Session – Umrath Lounge

Reception: Cocktails and Hors d'Oeuvres

Friday, May 2nd

8am-11am:

Invited Symposium: Deflating Mental Representation - Umrath Lounge

Chair: Zoe Drayson (University of California at Davis)

Author: Frances Egan (Rutgers)

Casey O'Callaghan (Washington University in St. Louis)

John Morrison (Barnard College)

Adina Roskies (University of California at Santa Barbara)

11am-11:30am:

Coffee & Snacks Break – Near DUC 234

11:30am-1:30pm:

Contributed Sessions – DUC 239

1. **Neuroscience, Psychiatry & Emotion** – DUC 239

Chair: Frank H. Wotton (Washington University in St. Louis)

Animal Models in Neo-Kraepelinian Psychiatry: From Syndromes to Components to Correlates

Derek Braverman (Washington University in St. Louis)

Addictive Architectures

Lorenzo Manuali (University of Michigan)

A Higher-Order Predictive Processing Account of Emotion

Yuyue Jiang (University of California, Santa Barbara)

Dezhi Luo (University of Michigan)

The Metaproblem of Psychopathology: Insights from Clinical Neuropsychiatry

Jesus Ramirez-Bermudez (National Institute of Neurology and Neurosurgery)

2. **Tools & Theory Development** – DUC 240

Chair: David Kinney (Washington University in St. Louis)

Testing for relationships between spatially variable neural computational function and spatially variable gene expression

Michael Barkasi (Washington University in St. Louis)

Resolving the tools- versus theory-first debate in recent philosophy of neuroscience: The metaphor of “theoretical infrastructure”

Mara McGuire (University of Pittsburgh)

John Bickle (Mississippi State University & University of Mississippi Medical Center)

How Acting Jointly differs from Acting Side-by-Side. A Dual EEG Study
Corrado Sinigaglia (University of Milan)

Generative AI models of cognition
Arieh Schwartz (The London School of Economics)

11:30am-1pm

3. **Explanation** – DUC 234

Chair: David Barack (University of Pennsylvania & Lingnan University)
Zero-Crossings and Computational Explanation: A Heretical Reading of Marr
Thomas Polger (University of Cincinnati)

Rebranding The Mereological Fallacy in Neuroscience
JP Gamboa (University of Minnesota)

Neuroscience in music research: Critical challenges and contributions
Andrew Goldman (Indiana University)

11:30am-2:30pm:

Sponsored Session: Neural Mechanisms Online (In person/ Zoom): Plasticity and/or Supramodality: Philosophical Implications – Umrath Lounge
Built to adapt: mechanisms of cognitive flexibility in the human brain
Marina Bedny (Johns Hopkins University)

Against cortical reorganization
John Krakauer (Johns Hopkins University)

The Brain in Context: Understanding Functional Flexibility
Daniel Burnston (Tulane University)

The challenge of (global) supramodality
Fabrizio Calzavarini (University of Turin)

2:30pm-3:15pm:

Lunch Break

3:15pm-5:15pm:

Contributed Sessions:

1. **The Relation between Affect and Cognition in the Human Affectome: Same, Different, Integrated, or Emergent?** -DUC 239

Chair: Kathleen Akins (Simon Fraser University)
Cognition and Emotion: Which Came First?
Joseph LeDoux (New York University)

Refocusing neuroscience: moving away from mental categories and towards complex
Luiz Pessoa (University of Maryland)

The Human Affectome: Cognitive, Developmental, and Atypicality
Deanna Barch (Washington University in St. Louis)

Under the Cover of Cognition: Affective Concern as Context
Alessandra Nicoletta Cruz Yu (Mount Sinai - New York)

Daniela Schiller (Mount Sinai - New York)

2. **Theory** – DUC 234

Chair: Ivan Cotumaccio (Washington University in St. Louis)
Neural representations are (still) theoretical posits
Zoe Drayson (University of California at Davis)

Five Illusions Challenge Our Understanding of Visual Experience
Paul Linton (Columbia)

Zetetic Scientific Entity Realism
Kenneth Aizawa (Rutgers - Newark)

Is the Integrated Information Theory of consciousness pseudoscience, or
are all of the critics wrong?
Brian Odegaard (University of Florida)

3. **Control, Interoception, & Introspection** – DUC 240

Chair: Afiya Faatuono (Washington University in St. Louis)
Epic Fail?
Philip Gerrans (University of Adelaide)

The Ozempic Effect: The Role of Interoception on Human Motivation
and Self-Control.

Lana Kuhle (Illinois State University)
Matthew Fulkerson (University of California, San Diego)

What Aphantasia Does Not Show
Chen-Wei Wu (Rice University)

Chance, Choice and Control: Two empirical challenges to the Luck
Objection
Henry Potter (Trinity College, Dublin)

5:15pm-5:30pm: Coffee & Snacks Break (15 minutes)

5:30pm-8:30pm: **Invited Symposium: Understanding Brain Function** - Umrath Lounge

Chair: Luiz Pessoa (University of Maryland)

Jacqueline Sullivan (Western University)

*Building Bridges Without Blueprints: The Epistemology of Translational
Team Neuroscience*

Russell Poldrack (Stanford University)

Prediction, compression, and understanding

Joseph LeDoux (New York University)

It's Only Words

Carl F. Craver (Washington University in St. Louis)

Explanation: Representations and their Normative Referents

Saturday, May 3rd

8am-9am: Keynote: Mazviita Chirimuuta (The University of Edinburgh) – Umrath Lounge

Why is Neuroscience so Difficult?

Introduction: Becko Copenhaver (Washington University in St. Louis)

- 9am-9:30am: Coffee Break – Umrath Lounge
- 9:30am-12pm: **Invited Symposium: Computation, Explanation, & Neuroscience** – Umrath Lounge
 Chair: Shirl Yang (Washington University in St. Louis)
 David Chalmers (New York University)
Neural and computational correlates of consciousness
 Danielle J. Williams (Washington University in St. Louis)
A historical perspective on computational explanation in neuroscience
 David Sussillo (Stanford University)
Flexible multitask computation in recurrent networks utilizes shared dynamical motifs
- 12pm-1:30pm: Lunch Break
- 1:30pm-4pm: Contributed Sessions:
1. **Topics on Reduction & Emergence** – DUC 239
 Chair: JP Gamboa (University of Minnesota)
 Emergence Makes Neuroscience Possible
 Luis H. Favela (Indiana University, Bloomington)

 Understanding cognitive processes across spatial scales of the brain
 JeongJun Park (Washington University in St. Louis)
 Hayoung Song (Washington University in St. Louis)

 Why Conserved Neurochemical Systems and Prosocial Octopuses Challenge the Autonomy of Psychology
 Dan Durso (University of Illinois, Urbana-Champaign)

 Neural Hardware for the Language of Thought: New Rules for an Old Game
 Gualtiero Piccinini (University of Missouri)

 Should we all defer to the neuroscientific definition of trauma? No.
 Judith Carlisle (University of Tennessee, Knoxville)
- 1:30pm-3:30 pm 2. **Functional Localization** – DUC 240
 Chair: Yoon Hee Jung (Washington University in St. Louis)
 Mapping Epistemic Priors of Hyperscanning Psychotherapy: The Asymmetry and Reciprocity Blindspots
 Nicolás Hinrichs (Max Planck Institute for Human Cognitive and Brain Sciences & Okinawa Institute of Science and Technology)

 Simulation Theory and Functional Localization
 Mitchell Herschbach (California State University, Northridge)

 Assigning Functions to Brain Structures: How Teleology Gets in the Way
 Vincent Bergeron (University of Ottawa)

 The Critical Brain Hypothesis and Universality in the Brain
 M. Shane Li (Georgia Institute of Technology)
- 1:30pm-4:30pm: **Sponsored Session: Philosophy of Memory Organization:**

The Philosophy and Neuroscience of Memory Traces – DUC 234

Chair: Megan Entwistle (Washington University in St. Louis)

Sheena Josselyn (University of Toronto & Sick Kids Hospital)

Manipulating Memory Traces in Mice

Zach Reagh (Washington University in St. Louis)

Constructing Memories from Templates and Key Moments

Sarah Robins (Purdue University)

Are Engrams Memory Traces

Felipe De Brigard (Duke University)

Remembering as Reverse Causal Inference

4:30pm-5pm: Coffee Break – Near DUC 234

5pm-7pm: Contributed Sessions

1. **Consciousness (Round 2) – DUC 239**

Chair: Ava Shropshire (Washington University in St. Louis)

Consciousness Multiplied

James McIntyre (Rutgers)

Reverberatory Dynamics: A Cybernetic Framework for Unifying Theories of Consciousness

Jeong-Kyu Han (College of Medicine, Korea University)

Large-scale, theory-driven psychophysics to assess the robustness of dissociations between objective visual capacity and subjective experience with attention

Megan Peters (University of California, Irvine)

A comparative biogenic approach to sentience

Eric Thomson (Triangle AI)

Carl B. Sachs (Marymount University)

2. **Mental Representations - DUC 234**

Chair: Caitlin Mace (University of Pittsburgh)

Content multiplicity in Neural Representation

Ori Hacoen (Rutgers - Newark)

Why the Brain's Representational Maps Are Not Uniformly Structural in Kind

Michael De Vivo (Florida State University)

In Defense of Neural Representation Pragmatism

Luke Pistol (Stanford)

Alternatives to encoding and decoding in thinking about representation

Daniel Burnston (Tulane University)

3. **Attention & Decision Making – DUC 240**

Chair: Evan Sommers (Washington University in St. Louis)

Advances in computational methods enable precise linkage of attentional control mechanisms and individual behavioral patterns

Davide Gheza (Washington University in St. Louis)

Deflating representations of modality

Luis Rosa (Washington University in St. Louis)

Decentralized Decision-Making and the Foundations of Agency
Ray Lee (MIT)

Attention Biases & Agency in Addiction
Kate Finley (Hope College)
Samantha Fede (Auburn University)

7:30pm-9:30pm: SPAN Banquet: Cocktails, Dinner, & Closing Remarks