FY 2024 Annual Report



Unit Name

Embodied Cognitive Science Unit

Students Supervised:

- Shannon Reiko Hayashi
- Ivan Shpurov
- Chen Lam Loh
- Georgii Karelin
- Natalya Weber
- Kazuma Takada

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

1. Froese, T.

Insight Deficits in Substance Use Disorders Through the Lens of Double Bookkeeping. Philosophy, Psychiatry, & Psychology 2024, 31, 365–378.

2. Froese, T.

Football as Foraging? Movements by Individual Players and Whole Teams Exhibit Lévy Walk Dynamics. Complexity 2024, 2024, 3196780.

- 3. Shpurov, I.; Froese, T.; Chialvo, D.
 - Beehive Scale-Free Emergent Dynamics. Scientific Reports 2024, 14.
- 4. Estelle, S.; Uhlig, K.; Zapata-Fonseca, L.; Lerique, S.; Morrissey, B.; Sato, R.; Froese, T. An Open-Source Perceptual Crossing Device for Investigating Brain Dynamics during Human Interaction, PLoS ONE 2024, 19.
- 5. Froese, T.
 - Irruption and Absorption: A "Black-Box" Framework for How Mind and Matter Make a Difference to Each Other, Entropy 2024, 26.
- 6. Froese, T.; Loh, C.; Putri, F.
 - Inter-Brain Desynchronization in Social Interaction: A Consequence of Subjective Involvement? Frontiers in Human Neuroscience 2024, 18.

Presentation at Conference

1. Froese, T.

Integrating Ecological Psychology with Predictive Processing via Irruption Theory. Symposium: Adaptive behavior and its ecological foundations 2025.

2. Froese, T.

Updates on the Irruption Theory of Consciousness. III CINET INTERNATIONAL WORKSHOP Biological cognition and "Artificial Intelligence" 2024.

Froese, T.
Irruption, Computation, and Anticipation. 2024.

4. Froese, T.

Irruption Theory and Neural Desynchronization. International Workshop "Advancing Brain Theory" 2024.

Seminars

1. Froese, T.

Human-Computer Augmentation: Challenges and Opportunities. 2024.

2. Froese, T.

Introduction to Irruption Theory. 2024.

Scholarly Contributions (For Unit Members Only)

Name of Unit Member (Author- Presenter)	Туре	Title	Outlet	Publisher	Year Pub
Georgii Karelin	Conference Proceedings	Floatiles: Self-Assembly Based On Cheerios Effect and Aperiodic Monotiles	ALIFE 2024: Proceedings of the 2024 Artificial Life Conference	Artificial Life Conference Proceedings	2024
Finda Putri	Poster Presentation at Conference	Perceptual crossing paradigm as a method to study second- person neuroscience: an EEG hyperscanning study	Society for Social Neuroscience		2024
Finda Putri	Poster Presentation at Conference	Investigating the Neural Correlates of Social Awareness	Association for the Scientific Study of Consciousness (ASSC 27)		2024
Aaron Cid Ramirez	Poster Presentation at Conference	State of art and integration of AI tools in molecular biology	Computational & Physical Understanding of Biological Information Processing		2024
Finda Putri	Presentation at Conference	EEG hyperscanning recording during Perceptual Crossing experiment to study second-person neuroscience	ESCAN 2024		2024