Call for Fellowships

01.06.2026 - 31.07.2027

Deadline for applications: April 30th 2026

The Center for Mind and Cognition is a platform at the Ruhr-University Bochum that aims to foster interdisciplinary research at the intersection of philosophy, psychology, psychiatry, computational modelling, neuroscience and other areas of cognitive research in engineering, law and educational research. We are pleased to announce an international call for fellowships from June 1st 2026 until July 31st 2027 aimed at outstanding researchers. We are flexible concerning the exact visiting period. People who did receive a fellowship do not qualify for application.

Fellowship No. 1: Senior Fellowship (1 month: 2950 €) or Junior Fellowship (1 month: 2000 € plus max. 500 € travel expenses reimbursement)

Episodic Memory and the Self: Philosophical Theory Formation

The fellowship can either be realized in experimental neuroscience or in philosophical theory formation: In the former case the fellow is supposed to work with the method of fMRI investigating either aspects of memory or of self-consciousness. In the latter case, the fellow is supposed to contribute to the theory of the interaction between memory and the self: how is episodic memory recall shaped by the self-model? How and to which extent is the self constituted by episodic memory?
The experimental fellowship is especially connected with the chair of Prof. Dr. Nikolai Axmacher. The theoretical fellowship is especially connected with chair of Prof. A. Newen. Both principal investigators are closely interacting concerning this research area and the fellow will be integrated in a DFG-research unit "Constructing Scenarios of the Past". Please send applications to: Prof. Dr. Nikolai Axmacher (nikolai.axmacher@ruhr-uni-bochum.de) and Prof. Dr. Albert Newen (albert.newen@rub.de)

Fellowship No. 2: Senior Fellowship (1 month: 2950 €) or Junior Fellowship (1 month: 2000 € plus max. 500 € travel expenses reimbursement)

Episodic Memory and the Self: Cognitive Neuroscience

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Both principal investigators are closely interacting concerning this research area and the fellow will be integrated in a DFG-research unit "Constructing Scenarios of the Past". Please send applications to: Prof. Dr. Nikolai Axmacher (nikolai.axmacher@ruhr-uni-bochum.de) and Prof. Dr. Albert Newen (albert.newen@rub.de)

Fellowships No. 3: Senior Fellowship (1 month: 2950 €) or Junior Fellowship (1 month: 2000 € plus max. 500 € travel expenses reimbursement)

Advanced analyses and computational modelling of electrophysiological data

This fellowship is ideally suited for an experimentalist, including medical researchers, who would like to explore advanced data analysis and/or computational modelling on one of their existing data sets, supported by the expertise of our Neural Data Science group. For example, if you have electrophysiological recordings (spike data or local field potentials) collected alongside behavioral data, we can apply modern analysis methods such as dimensionality reduction or machine learning techniques. The core aim is to identify latent states that reflect internal cognitive dynamics. Using machine learning and state-space modeling, the project aims to uncover how these latent states evolve over time and how they correspond to different cognitive functions such as decision-making or attention. Applicants are expected to be proficient in data processing and programming (e.g. in Python or Matlab). Please send your application as well as requests for further information to Prof. Dr. Robert Schmidt (robert.schmidt@rub.de).

Fellowship No. 4: Short-term Senior Fellowship (2 weeks: 1500 Euro)

Episodic Memory and Spatial Representation

A central question in neuroscience is why the hippocampus is essential for episodic memory in humans while predominantly exhibiting spatial representations in other species. While some suggest disparate functions across species, attempts to reconcile these two aspects fall into three broad classes. First, spatial representation is the primary hippocampal function and serves as a scaffold for memory. Second, there is a common element underlying spatial navigation and episodic memory. Third, the primary function is storing and retrieving episodic memories, with spatial representations emerging from this memory function. The chosen fellow is expected to contribute to a conceptual and/or computational theory that addresses this debate. Applicants must hold a PhD, have published at least three related peer-reviewed articles, and possess strong interdisciplinary interests across neuroscience, psychology, and philosophy. Please direct inquiries and applications to Prof. Dr. Sen Cheng (sen.cheng@rub.de).

Fellowship No. 5: Junior Fellowship (2 months: 2000 € plus max. 500 € travel expenses reimbursement)

Credence, Cost, and Consciousness: Loss-Calibrated Attribution Across Kinds of Minds

We propose a two-month modeling project that turns consciousness attribution into a transparent decision problem under uncertainty. Using a neuroethological lens (as in Cabral-Calderin et al., 2025), we will separate evidence about experience (phenomenality) from evidence about performance (intelligence). Thus, we will construct graded evidence tiers grounded in Tinbergen-style constraints, then specify a Bayesian decision model with explicit loss functions for false positives (over-attribution: e.g., high-end AI systems) and false negatives (under-attribution: e.g., cerebral organoids, assembloids, xenobots, etc.). The model will yield principled thresholds for when to suspend judgment, when to seek targeted measurements, and when precautionary governance is warranted. Worked examples will cover

nonverbal animals, cerebral organoids, assembloids, xenobots, and reasoning-capable AI systems to show how the same decision rule resists both credulous anthropomorphizing and skeptical dismissal. Deliverables are a framework paper and a one-page decision aid suitable for labs and ethics committees. Please direct inquiries and applications to Prof. Dr. Lucia Melloni (lucia.mellonibuljevic@rub.de).

Fellowship No. 6: Senior Fellowship (0.5 month: 1500€) or Junior Fellowship (1 month: 2000 €) – travel expenses will be additionally reimbursed up to 500€.

a) **Language – Investigating semantics and pragmatics with EEG and/or LLMs**
b) **Memory – The role of traces for and beyond remembering**

Fellowship (a) invites researchers from philosophy and linguistics or related disciplines who have an interest in investigating theories in semantics and pragmatics, experimentally in EEG or through modelling with Large Language Models. The fellow will have the opportunity to cooperate with the Werning EEG lab and interact with our prospective project "The evaluation of empathy-related linguistic performance in large language models: Comparing surprisal values for next-word predictions in human EEG and LLMs" within the DFG Priority Program *Robust Assessment & Safe Applicability of Language Modelling: Foundations for a New Field of Language Science & Technology*.
Fellowship (b) invites researchers with an interest in empirically informed philosophical theories of episodic memory and, more generally, episodic simulation processes such as imagination and episodic future/hypothetical/counterfactual thinking. Fellows are offered the opportunity to collaborate with our projects on "Episodic Memory Traces" (P3.2) and "Episodic Memory Reports" (P10) in the DFG research unit *Constructing Scenarios of the Past*. Please send applications to: Prof. Dr. Markus Werning (markus.werning@rub.de with cc: christiane.dahl@rub.de).

Fellowship No. 7: Senior Fellowship (1 month: 2950 €) or Junior Fellowship (2 months: each 2000 € plus max. 500 € travel expenses reimbursement)

Human–AI Interaction, Stress and Social Disconnection

Health and disease emerge from a bio-psycho-social interplay that is increasingly shaped by societal and technological change, including urbanization, digitalization, and the integration of artificial intelligence into everyday life. Stress and loneliness constitute transdiagnostic risk factors in mental, neurodegenerative, and pain-related disorders, and critical targets for prevention and intervention. The Center of Medical Psychology and Translational Neuroscience integrates complementary expertise from Prof. Sigrid Elsenbruch (Medical Psychology and Medical Sociology), Prof. Adriane Icenhour (Affective Neuroscience), and Prof. Dirk Scheele (Social Neuroscience) to address these health challenges by bridging basic and clinical domains to advance translational neuroscience.
The fellow will collaborate with the principal investigators to investigate stress-related neurocognitive response profiles during chatbot interactions in lonely and non-lonely individuals. Using neuroimaging, psychophysiological, and neuroendocrine measures, the project aims to identify mechanisms by which socially embedded technologies modulate stress and social connectedness. The fellow may further collaborate to develop a theoretical framework to guide future research projects and inform clinical risk stratification, digital health interventions, and human-AI interactions.
Please send applications to: Sigrid.Elsenbruch@rub.de, Adriane.Icenhour@rub.de, and Dirk.Scheele@rub.de

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General Information: Fellowships & Applications

All fellows are invited to deliver a fellow lecture and will have the opportunity to meet members of the Center for Mind & Cognition.

Applications should include:

1. A (brief) letter of application including personal information academic background, and research interests (please indicate the number of and the title of the fellowship you apply for).

2. A brief proposal for a research project (1-2 pages) if the fellowship is planned for at least one month.

3. CV including a list of publications, talks, conferences attended and teaching experience. IN case of a junior fellowship, please add the contact details of three recommended potential referees.

4. One representative article as PDF document.

All documents of the candidate should be sent electronically. We regret that we will not be able to return any submitted material.