

Call for Proposals

No. 32

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Priority Programme “The Active Self” (SPP 2134)

In 2018 the Senate of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) established the Priority Programme “The Active Self” (SPP 2134). The programme is designed to run for six years. The present call invites proposals for the second and last three-year funding period.

The Priority Programme brings together cognitive and behavioural scientists from various disciplines, including psychology and robotics, to study the sensorimotor grounding of the human minimal self. This concept describes a person’s phenomenal experience in the here and now and how we perceive ourselves to be in a particular situation. While this experience is likely to be dominated by information delivered by the senses, i.e., by self-perception in a literal, immediate sense, humans also have knowledge about themselves, amassed over years, and a sense of understanding how their self relates to others.

The relatively recent increasing interest in the self is fueled by important methodological improvements, such as the availability of virtual-reality techniques and affordable robots with humanoid characteristics, and the development of non-invasive methods to study cognition in infants, but also by converging lines of theoretical thinking related to ideomotor processes on the one hand and embodied cognition on the other. The programme seeks to unravel the degree to which our self-representation is plastic and sensitive to immediate experience, to which degree it is constrained by past experience, how it integrates experiences of agency and action-ownership, how it affects other cognitive processes, and to what degree self-representation can be established in artificial agents.

The goal of the Priority Programme is to:

- provide empirically validated core mechanisms underlying the emergence of behavioural indicators of selfhood (including body ownership and personal agency);
- test how these core mechanisms generate a self in the course of ontogenetic development or the acquisition of expertise;
- integrate the knowledge about core mechanisms and their role in development and learning into a dynamic model of self-construction;
- design robotics experiments that can test hypotheses on the development of the minimal self;
- and advance the state of the art in cognitive skills in robotics, in particular for human-robot interaction.

This goal will be achieved by addressing five key questions:

- To which extent is the self plastic? (e.g., how and how much is self-representation affected by, and emerging from sensorimotor experience, socio-cultural and situational factors)
- To which degree does the sensorimotor impact on the self rely on or interact with internal, endogenous constraints? (e.g., self-concept, body image)
- What are the roles of body ownership and agency? (e.g., are they independent factors or both emerge from event control)
- How does creating and having a self work back on sensorimotor skills and cognitive processes? (e.g., can particular kinds of self-perception increase or reduce cognitive abilities)
- What are the mechanisms and prerequisites that allow an agent to develop a self? (e.g., can robots develop a self)

The Priority Programme focuses on the minimal (rather than the narrative) self; empirical approaches (rather than conceptual analyses), including theory-driven experimental studies, modeling, and simulation approaches; the sensorimotor basis and phenomenal experience of self; and the actual functional mechanisms underlying the construction of a self (rather than existence proofs or brain activity, situational factors, or behaviour merely correlated with aspects of self).

Participating projects will need to address at least one of the five key questions. Moreover, successful proposals will need to explain in detail (a) which of the questions will be addressed by the planned project; (b) how the minimal self will be assessed and operationalized; (c) that and how the suggested empirical approach is suited to tackle the respective question(s); (d) and what the expected contribution to the attempt to answer the respective question(s) will be.

The programme is intended to be strongly interdisciplinary in nature and proposals for the second funding phase are required to include cooperation across disciplinary borders.

The Priority Programme intends to support young investigators through workshops, a gender equality programme, and a family-friendly policy.

Proposals must be written in English and submitted to the DFG by **27 January 2021**. Please note that proposals can only be submitted via elan, the DFG's electronic proposal processing system.

Applicants must be registered in elan prior to submitting a proposal to the DFG. If you have not yet registered, please note that you must do so by **13 January 2021** to submit a proposal under this call; registration requests received after this time cannot be considered. You will normally receive confirmation of your registration by the next working day. Note that you will be asked to select the appropriate Priority Programme call during both the registration and the proposal process.

If you would like to submit a proposal for a new project within the existing Priority Programme, please go to Proposal Submission – New Project – Priority Programmes and select “SPP 2134/2 The Active Self” from the current list of calls. Previous applicants can submit a proposal for the renewal of an existing project under Proposal Submission – Proposal Overview/Renewal Proposal.

In preparing your proposal, please review the programme guidelines (form 50.05, section B) and follow the proposal preparation instructions (form 54.01en). These forms can either be downloaded from our website or accessed through the elan portal. Please refer to the rules for publication lists (form 1.91en).

Further Information

More information on the Priority Programme is available under:
<http://activeself.de>

The elan system can be accessed at:
<https://elan.dfg.de/en>

DFG forms 50.05 and 54.01 can be downloaded at:
www.dfg.de/formulare/50_05
www.dfg.de/formulare/54_01

For scientific enquiries please contact the Priority Programme coordinator:
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