



# BIOLOGICALLY INSPIRED COGNITIVE ARCHITECTURES

## AUTHOR INFORMATION PACK

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### DESCRIPTION

The focus of the journal is on the integration of many research efforts in addressing the challenge of creating a real-life **computational** equivalent of the **human mind**. Therefore, the journal publishes on the multidisciplinary study of **cognitive architectures** found *in vivo* and *in silico*.

To help foster a wider understanding, at a computational level, of how **natural intelligent systems** develop their **cognitive**, **metacognitive**, and **learning** functions, the journal will promote the overarching goal of creating one unifying widespread framework for the computational modeling of **biologically inspired cognitive architectures**.

The scope includes (but is not limited to): **Cognitive science**, with a focus on higher cognitive functions and their cognitive architecture models: including autonomous cognition and metacognition, imagery, sensemaking, meta-learning, self-regulated learning, life-long learning and cognitive growth, "critical mass" of a learner, models of creativity, affects, emotions and feelings, emotional competence, social cognition, the self, human-like episodic memory, language perception, processing, production, acquisition, and development; **Computer science** and **engineering**, with a focus on human-like artificial intelligence: cognitive architectures, virtual and physical cognitive robotics, synthetic characters, bootstrapped and human-like learning, human-computer interface, vision, computational linguistics, intelligent tutoring systems; **Neuroscience**, with a focus on higher cognition and learning: system-level computational neuroscience, cognitive neuroscience, models of the neural substrates of semantic and episodic memory and awareness, agency, emotions and feelings, theory of mind and social cognition, language, imagery, voluntary control, goal and value systems, spatial cognition, etc. Contributions to the journal should include a **cognitive architecture** element and an element of **biological inspiration**, the latter understood broadly (e.g., inspiration by the human cognition). Both mature and new cutting edge research are welcomed, provided they have a strong emphasis on concrete empirical or theoretical studies. [Submissions](#) of a purely philosophical nature are discouraged and will be redirected elsewhere.

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**M.P. Witter**, Norwegian University of Science & Technology NTNU, Trondheim, Norway

Specialties: Neuroanatomy and hippocampus.

## GUIDE FOR AUTHORS

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### INTRODUCTION

Contributions to *Biologically Inspired Cognitive Architectures* should include a cognitive architecture element and an element of biological inspiration, the latter understood broadly (e.g., inspiration by the human cognition). Both mature and new cutting edge research are welcomed, provided they have a strong emphasis on concrete empirical or theoretical studies. Contributions need to be clear about what their particular advance is toward solving the BICA Challenge: creating a real-life computational equivalent of the human mind.

Submissions of a purely philosophical nature are discouraged and will be redirected elsewhere.

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