Methods for Biologically Inspired Generic Artificial Intelligence and Robotics

We invite applications for PhD studentships in the Adaptive Systems Research Group at the University of Hertfordshire to investigate biologically inspired and generic approaches to Artificial Intelligence, with applications to Robotics. We particularly focus on information-theoretic methods to study cognitive modelling, decision-making, feature extraction, robust and flexible control, embodiment, intrinsic and "altruistic" motivation models, and generalization. Also questions of origin of life and cognition from first principles, and emergence of complexity and self-organization are being explored.

The prospective candidates should have a very strong first degree; a keen interest in delving into and contributing to a fresh and fast-moving research area; and an outstanding background in Computer Science, Computational/Cognitive Robotics, Physics, Mathematics, Statistics or another relevant computational/quantitative discipline. In particular, they should demonstrate excellent programming skills in at least one major computer language. A mathematical/numerical background would be highly desirable. Knowledge in at least one of the following fields would be a plus: probability theory, information theory, differential geometry, control, dynamical systems, data modelling/neural network techniques.

The envisaged research will take place in the vibrant and enterprising environment of the Adaptive Systems Research Group in the School of Computer Science at the University of Hertfordshire; there will also be the opportunity to collaborate with the School's successful humanoid robot RoboCup team, the Bold Hearts.

For more information about the field or relevant questions, please contact:

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