

CALL FOR PARTICIPATION

4th International Symposium on Imitation in Animals and Artifacts

at the AISB'07 Convention in Newcastle upon Tyne, UK
April 2nd-5th 2007

http://vislab.isr.ist.utl.pt/aisb07_imitation/

ABSTRACT:

Imitation facilitates transmitting culture practices and ideas from generation to generation, enabling humans, animals, and now robots, to learn skills others have already mastered. By avoiding the lengthy period of trial-and-error to accomplish new tasks, imitation is thus a very efficient learning method, and also a very intuitive way to program robots by teaching.

Imitation is unique among other social learning mechanisms in that it requires the observer to understand the action being performed, and then to relate it to its equivalent motor representations. It also requires the integration of information from sensory, motor, and brain systems, whose underlying mechanisms are not well-understood yet. Explaining the imitative abilities of humans and other animals has proved to be a complex subject. Indeed, it is highly non-trivial even to say exactly what it means for two behaviours to be the "same".

The mechanisms of imitation and social learning are not well-understood, and the connections to social interaction, communication, development, and learning are deep, as recent research from various disciplines has started to uncover. Comparison of imitation in animals and artifacts reveals that easy tasks for machines can be hard tasks for animals and vice-versa. However, computational complexity issues do not explain, by themselves, the existence or not of imitation behaviours in animals, and the integration of higher level cognitive capabilities like agent's goals, intentions and emotions, may play a fundamental role in explaining these differences.

This interdisciplinary workshop will bring together researchers from neuroscience, brain imaging, animal psychology, computer science and robotics to examine the latest advances to imitation, aiming to further advance our understanding of the underlying mechanisms.

AREAS OF INTEREST (not limited to):

- * Cognitive Development and Imitation
- * Neurobiological Foundations of Imitation
- * Social interaction and Imitation
- * Language acquisition
- * Imitation, Intentionality and Communication
- * Imitation in Animals
- * Learning by Imitation to bootstrap the acquisition of skills & knowledge
- * The Role of Imitation in the Development of Social Cognition
- * Robot Imitation
- * Computational mechanisms of imitation
- * Joint-attention and perspective taking
- * Cultural transmission of skills
- * Teaching and scaffolding of behaviours
- * Imitation and motivation

Chairs:

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Special Dates:

Dec 15 Paper submissions
Feb 05 Notification
Feb 22 Camera ready copies
April 02-05 AISB'07

Workshop website:

http://vislab.isr.ist.utl.pt/aisb07_imitation/

Conference website:

<http://www.aisb.org.uk/convention/aisb07/>