

Call for Papers

AISB'07 Artificial and Ambient Intelligence
April 2nd-5th 2007, Newcastle University, Newcastle upon Tyne, UK
<http://www.aisb.org.uk/convention/aisb07/>

Symposium: SPATIAL REASONING AND COMMUNICATION

OUTLINE

Spatial cognition has a significant role in our everyday lives. When commuting from our home to our work place, we need a spatial map that enables us to find a reasonable route through the city's road network. When looking for a folder or a textbook in our office, it helps if we know the spatial location at which the item is to be found. When constructing a building, it is essential to understand the spatial-functional relations between the parts of the building: ceilings have to be supported by walls, windows should be inside walls, etc.

Humans interacting with spatial environments typically do so without major conscious efforts; also, communication about spatial relations mainly proceeds smoothly. In spite of the fact that spatial language is highly ambiguous and context-sensitive in many respects, humans generally manage to agree on a suitable interpretation. Space has become such an integral part of our lives that it is used even outside a concrete spatial framework, in metaphorical ways, as in phrases like "on top of the world". It can therefore be successfully argued that any ambient intelligence must have the capability of some form of spatial cognition, which needs to be successfully integrated with, and communicated to, the humans interacting with the environment.

This symposium aims at bringing together recent research developments in spatial cognition in relation to ambient intelligence, addressing in particular the relationship between humans and intelligent technology interacting and communicating in spatial environments. It welcomes contributions to all aspects of spatial cognition concerning communication and computation, including (but not limited to) new results about:

- Formal analyses of spatial calculi and models
- Integration of spatial calculi with other reasoning formalisms (e.g., temporal calculi)
- Spatial database queries
- Context-sensitive interpretation and formalization of spatial language, and its mediation towards system-relevant aspects, for example via spatial ontologies
- Spatial human-machine communication via language and/or other modalities
- Computational treatment of functional-spatial relationships in natural environments
- Handling of different spatial granularities
- Dealing with uncertainty in spatial cognition

Selected contributions will be considered for publication in an edited collection or a special issue for a journal.

Important dates:

08/01/07 Paper submission deadline. Papers should be sent to Reinhard Moratz in ECAI format (5 pages):

<http://ecai2006.itc.it/cda/images/ecai2006.pdf>
<http://ecai2006.itc.it/cda/images/ecai2006.zip>

05/02/07

Notifications

ORGANISERS

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(please replace the \$ with an @)

Invited Speakers

Tony Cohn
Kenny Coventry

The Program Committee includes:

John A. Bateman
Brandon Bennett
Thomas Bittner
Laura Carlson
M. Teresa Escrig
Kathleen Stewart Hornsby
Lars Kulik
Stefan Woelfl