

# Movement and Orientation in Built Environments: Evaluating Design Rationale and User Cognition

An **EDRAMOVE** intensive in collaboration with **SFB/TR8 Spatial Cognition, Germany**

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## ABSTRACT

Although architects shape human movement and cognition through the process of designing buildings, their conceptions about these basic processes may not match those of the users. Movement and cognition in built environments is usually investigated from the perspectives of either the user or the designer. This intensive will provide an open forum to bridge these perspectives in an effort to link design and research. Specifically, this workshop will feature:

- Studies about the intentions that architects have regarding shaping human movement and human cognition in space as well as investigations into relevant knowledge employed by designers for these activities.
- Studies about human movement and spatial cognition, both in real settings and under controlled experimental conditions (e.g. virtual reality studies)
- (Technical) design support tools to improve the planning process and evaluation of future buildings with respect to anticipating and shaping human movement.
- Evaluation techniques: observations in the field, spatial analysis methods of existing and planned building layouts, agent studies.
- Cognitive mapping research: impact of environmental structure on navigability, memorability, perception and appreciation.

Most importantly, it will provide a forum for sharing and ‘linking differences’ of various approaches to studying and applying design rationale and stake-holder cognition, with special emphasis on human movement and orientation.

This full day intensive will have 9 presentations and 5 posters that will be followed by a panel / open floor discussion.

**Papers:** Drew Dara Abrams: *Learning and Navigating Built Environments – How Spatial Cognition and Behavior Relate to Environmental Form.*  
Sven Bertel, Thomas Barkowsky & Christian Freksa: *Mental model-centered design for built environments.*  
Martin Brösamle & Christoph Hölscher: *The Architects' Understanding of Human Navigation.*  
Erica Calogero: *Getting from A to B and Back: Pedestrian Route Choices in a School Environment.*  
Christian Derix, Åsmund Gamlesæter & Pablo Miranda Carranza: *3d isovists and spatial sensations: two tools and a case study.*  
Eve A. Edelstein, Klaus Gramann, Jurgen Schulze, Tzyy-Ping Jung, Scott Makeig, Laura Wolszon & Eduardo Macagno: *Neural Responses during Navigation and Wayfinding in the Virtual Aided Design Laboratory – Brain Dynamics of Re-Orientation in Architecturally Ambiguous Space.*  
Christine Kohlert: *Problem Seeking – Visualization Method for Active User Involvement.*  
Ryuzo Ohno: *Effect of wording of fire warning announcements on evacuation behavior in subway stations.*

Aga Skorupka: *Do you know your way? A mixed-method study on the use of virtual environments in wayfinding research.*

**Posters:**

Rachna Lévesque: *Good space is used space – but can it be engineered?*

Danjuma I. Nkwenti: *Movement Dynamics and Shopping Patronage – A Syntactic Profiling of Shopping Centers in Business Districts.*

Renee Puusepp & Paul Coates: *Emergent circulation patterns: Generating movement networks for buildings using stigmergy.*

Katelijn Quartier: *Lighting in the build environment: human perception, behaviour and movement.*

Ezgi Tuncer: *Where Space Becomes Place: Searching for “the State of Belonging” in Samatya.*