Program

Monday, 15 September 2014

Spatial Cognition 2014 Workshops and Tutorials

08:30  Registration

09:00  Workshop 1: Design cognition and behavior: Usability in the built environment  
       Workshop 2: Indoor Wayfinding Assistance  
       Tutorial 2: Information Visualization for Innovating Research Methods

11:00  Coffee Break

11:30  Workshop 1: Design cognition and behavior: Usability in the built environment  
       Workshop 2: Indoor Wayfinding Assistance  
       Tutorial 2: Information Visualization for Innovating Research Methods

13:00  Lunch Break

14:30  Tutorial 1: CogSketch Tutorial  
       Workshop 2: Indoor Wayfinding Assistance  
       Tutorial 2: Information Visualization for Innovating Research Methods

16:00  Coffee Break

16:30  Tutorial 1: CogSketch Tutorial  
       Workshop 2: Indoor Wayfinding Assistance  
       Tutorial 2: Information Visualization for Innovating Research Methods

18:00  End of Workshop / Tutorial Day
Tuesday, 16 September 2014

SFB/TR 8 Spatial Cognition Final Colloquium

08:30   Registration

09:00   Welcome Addresses
        Christian Freksa, Kerstin Schill and Bernhard Nebel

09:15   Invited Talks
        Remembering Spatial Location: Extending the Categorical Adjustment
        Model to the Real World
        Nora Newcombe

                       Cognitive Computing, Logic, and Human Reasoning
                 Ulrich Furbach

10:50   Coffee Break

11:20   SFB/TR 8 Presentations
        Strong Spatial Cognition
        Christian Freksa

                       Wayfinding: Interdisciplinary Foundations and Applications
                 Christoph Hölscher

12:00   University Rectors' Addresses
        Twelve Years SFB/TR 8 Spatial Cognition at the Universities of Bremen and
        Freiburg
        Bernd Scholz-Reiter and Hans-Jochen Schiewer

12:20   SFB/TR 8 Presentations
        Localization, Mapping, and Exploration
        Cyrill Stachniss

                       People-Centered Spatial Design
                Mehul Bhatt

13:00   Lunch Break

14:30   Posters, Demos, Lab Visits

18:00   Installation
        Ada's Keepsake as Space-Time Machine cognitive animation
        Elisabeth Weissensteiner

19:00   Welcome Reception for Spatial Cognition 2014 / SFB/TR 8 Final Colloquium
Wednesday, 17 September 2014

Spatial Cognition 2014 Conference

08:30 Registration

09:00 Keynote (introduction: Christian Freksa)
Green then Smart - Spatial Awareness in Plant
Stefano Mancuso

10:00 Spatial Memory I (chair: Maria Vasardani)

Spatial Updating in Narratives
Adamantini Hatzipanayioti, Alexia Galati and Marios Avraamides

Effects of Global and Local Processing on Visuospatial Working Memory
Holly Taylor, Ayanna Thomas, Caterina Artuso and Caroline Eastman

11:00 Coffee Break

11:30 Spatial Memory II (chair: Dedre Gentner)

Environment Learning from Spatial Descriptions: The Role of Perspective and Spatial Abilities in Young and Older Adults
Chiara Meneghetti, Erika Borella, Veronica Muffato, Rossana De Beni and Francesca Pazzaglia

Alignment Effects and Allocentric-Headings within a Relative Heading Task
Heather Burte and Mary Hegarty

On Egocentric and Allocentric Maps
Wai Kiang Yeap

13:00 Lunch Break

14:30 Language and Communication I (chair: Bernhard Nebel)

Attentional Distribution and Spatial Language
Thomas Kluth and Holger Schultheis

Boundaries and Prototypes in Categorizing Direction
Vivien Mast, Diedrich Wolter, Alexander Klippel, Jan Oliver Wallgrün and Thora Tenbrink

Spatial Language in Brazilian Portuguese as Perceived by the General Upper Model
Rodrigo de Oliveira
16:00 Coffee Break

16:30 Language & Communication II / Computational Models *(chair: Thora Tenbrink)*

**Spatial References with Gaze and Pointing in Shared Space of Humans and Robots**  
*Patrick Renner, Thies Pfeiffer and Ipke Wachsmuth*

**Spatial Planning: An ACT-R Model for the Tower of London Task**  
*Rebecca Albrecht and Marco Ragni*

**Spatial Numerosity: A Computational Model Based on a Topological Invariant**  
*Tobias Kluth and Christoph Zetzsche*

18:00 End of Conference Day

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**Thursday, 18 September 2014**

**Spatial Cognition 2014 Conference**

08:30 Registration

09:00 Keynote *(introduction: Thomas Barkowsky)*  
**Connecting Location and Place**  
*Stephan Winter*

10:00 Diagrams and Maps *(chair: Kenneth Forbus)*

**Qualitative Representations of Schematized and Distorted Street Segments in Sketch Maps**  
*Sahib Jan, Angela Schwering, Malumbo Chipofya and Jia Wang*

**Spatial Reasoning in Comparative Analyses of Physics Diagrams**  
*Maria Chang, Jon Wetzel and Kenneth Forbus*

11:00 Coffee Break
11:30  Wayfinding and Navigation I (chair: Ruth Dalton)

Lateralization of Route Continuation and Route Order
Ineke van der Ham and Jacco van den Hoven

Hierarchical Bayesian Cue Interaction in Human Spatial Navigation
Xiaoli Chen and Timothy McNamara

Cognitive Values of Place Image Detected from Spatial Distribution of Building Names
Toshihiro Osaragi

13:00  Poster Session & Lunch Break

16:00  Excursion

19:00  Conference Dinner

Friday, 19 September 2014

Spatial Cognition 2014 Conference

08:30  Registration

09:00  Keynote (introduction: Mary Hegarty)
How to Differentiate Spatial Reference Frames
Ranxiao Frances Wang

10:00  Spatial Ability I (chair: Alexander Klippel)

Mechanisms of Spatial Learning: Teaching Children Geometric Categories
Linsey Smith, Raedy Ping, Bryan Matlen, Micah Goldwater, Dedre Gentner and Susan Levine

Spatial Concepts: Sensitivity to Changes in Geometric Properties in Environmental and Figural Perception
Toru Ishikawa

11:00  Coffee Break
11:30 Spatial Ability II (chair: Holly Taylor)

Virtual Distance Estimation in a CAVE
William E. Marsh, Jean-Rémy Chardonnet and Frédéric Merienne

Pellet Figures, the Feminine Answer to Cube Figures? Influence of Stimulus Features and Rotational Axis on the Mental-Rotation Performance of Fourth-Grade Boys and Girls
Vera Ruthsatz, Sarah Neuburger, Petra Jansen and Claudia Quaiser-Pohl

A Preliminary Study on the Role of Movement Imagery in Spatial Perception
Margaret Tarampi, Michael Geuss, Jeanine Stefanucci and Sarah Creem-Regehr

13:00 Lunch Break

14:30 Technical Approaches (chair: Sven Bertel)

Dimensions of Uncertainty in Evidential Grid Maps
Thomas Reineking and Joachim Clemens

Crossing the Boundary: Two Benchmarks for Qualitative Spatial Reasoning bridging Relative Directions and Mereotopology
André van Delden and Reinhard Moratz

Active Sensorimotor Object Recognition in Three-Dimensional Space
David Nakath, Tobias Kluth, Thomas Reineking, Christoph Zetzsche and Kerstin Schill

16:00 Coffee Break

16:30 Wayfinding and Navigation II (chair: Christoph Hölscher)

Up, Down, Turn Around: Assisted Wayfinding Involving Level Changes
Stephany Bigler, Annina Brügger, Fiona Utzinger and Kai-Florian Richter

Effect of Simplicity and Attractiveness on Route Selection for Different Journey Types
Sarah Cook and Roy A. Ruddle

The Road to Direction: The Impact of Road Asymmetry on Street-Based Network Small-Worldness
Maxime Sainte-Marie

18:00 End of Spatial Cognition 2014