

### Schematic Program Aula III

	Monday, September 14	Tuesday, September 15	Wednesday, September 16	Thursday, September 17	Friday, September 18	Saturday, September 19						
9:00 - 9:20	Registration (Aula VI)  Putting up Poster Presentations (Aula III & IV)	Symposium  Toivainen: "Spatiotemporal music cognition"	Symposium  Hölscher, Nenci, Troffa: "Environmental determinants for orientation and navigation"	Symposium  Van der Ham, Postma: "The neurocognition of categorical and coordinate spatial relation processing"	Tutorial  Lupiañez: "Exogenous vs. endogenous spatial orienting"	Visit to S. Pietro in Vincoli						
9:20 - 9:40												
9:40 - 10:00												
10:00 - 10:20												
10:20 - 10:40												
10:40 - 11:00												
11:00 - 11:20	Conference opening (Aula Magna)	Coffee break	Coffee break	Coffee break	Coffee break	Presentation of the activities of CIRPS						
11:20 - 12:00												
12:00 - 12:20							Keynote (Aula Magna) Tversky: "Segmenting and connecting time and space"	Keynote (Aula Magna) Ormerod: "Optimizing and satisfying in spatial problem-solving"	Keynote (Aula Magna) Freksa: "Spatial reasoning for intelligent action and human-robot interaction"	Keynote (Aula Magna) Lupiañez: "Orienting attention in space: Attentional capture and voluntary control"	Paper Session: Cognitive neuroscience of action and space	Farewell Lunch in the Cloister of the Faculty of Engineering  (hosted by CIRPS)
12:20 - 12:40												
12:40 - 13:00												
13:00 - 13:20												
13:20 - 14:40	Lunch time	Lunch time	Lunch time	Lunch time	Lunch time							
14:40 - 15:00	Symposium Hols, Kurata: "Spatial models meet spatial language: Computational and formal models"	Symposium Bodine, Scherer: "The promise and impact of technology in cognition and spatial negotiation"	Symposium Imberty: "Music and space: A phenomenological point of view"	Symposium Vickers: "Gaze and cognitive control in motor performance"	Symposium Pazzaglia: "Emotion, motivation and cognition in human wayfinding behavior"							
15:00 - 15:20												
15:20 - 15:40												
15:40 - 16:00												
16:00 - 16:20												
16:20 - 17:00							Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	
17:00 - 17:20	Paper Session: Space and cognitive performance	Paper Session: Ecological spatial cognition	Paper Session: Rhythm, language and motor action	Paper Session: Cognitive control in space	Doctoral Colloquium Raffone							
17:20 - 17:40												
17:40 - 18:00												
18:00 - 18:20							Tutorial Scherer: "Using a mixed method research design"	Poster session I  (Odd numbers)	Tutorial Tversky: "Space of thought"	Tutorial Shiplely: "Understanding events, space and action: The role of segmentation and grouping"		
18:20 - 18:40												
18:40 - 19:00												
19:00 - 19:20												
19:20 - 19:40	Closing of works											
19:40 - 20:00												
after 20:00	Classical Ballet at the National Dance Academy	Night Visit of Castel Sant'Angelo	Theatre by the Research Group on Traditional Singing and Theatre Arts	Social dinner at "La Limonaia", Villa Torlonia	Disco night at San Lorenzo							

### Schematic Program Aula IV

	Monday, September 14	Tuesday, September 15	Wednesday, September 16	Thursday, September 17	Friday, September 18	Saturday, September 19
9:00 - 9:20	<b>Registration (Aula VI)</b>	<b>Paper Session:</b>  Space and language	<b>Paper Session:</b>  Virtual environments	<b>Paper Session:</b>  Spatial representation	<b>Tutorial</b> Postma: "Remembering where you have been helps remembering what you have done"	Visit to S. Pietro in Vincoli
9:20 - 9:40						
9:40 - 10:00						
10:00 - 10:20						
10:20 - 10:40						
10:40 - 11:00	<b>Putting up Poster Presentations (Aula III &amp; IV)</b>	<b>Coffee break</b>	<b>Coffee break</b>	<b>Coffee break</b>	<b>Coffee break</b>	Presentation of the activities of CIRPS
11:00 - 11:20						
11:20 - 12:00	<b>Conference opening (Aula Magna)</b>	<b>Coffee break</b>	<b>Coffee break</b>	<b>Coffee break</b>	<b>Coffee break</b>	Farewell Lunch in the Cloister of the Faculty of Engineering  (hosted by CIRPS)
12:00 - 12:20	<b>Keynote (Aula Magna)</b> Tversky:	<b>Keynote (Aula Magna)</b> Ormerod:	<b>Keynote (Aula Magna)</b> Freksa:	<b>Keynote (Aula Magna)</b> Lupiañez:	<b>Paper Session:</b>	
12:20 - 12:40	"Segmenting and connecting time and space"	"Optimizing and satisficing in spatial problem-solving"	"Spatial reasoning for intelligent action and human-robot interaction"	"Orienting attention in space: Attentional capture and voluntary control"	Spatial cognition in robotic agents	
12:40 - 13:00						
13:00 - 13:20						
13:20 - 14:40	<b>Lunch time</b>	<b>Lunch time</b>	<b>Lunch time</b>	<b>Lunch time</b>	<b>Lunch time</b>	
14:40 - 15:00	<b>Paper Session:</b>  Development and ageing	<b>Symposium</b> Gentner: "Spatial language and spatial cognition"	<b>Symposium</b> Catarci, Mecella, Aiello: "Spatial and cognitive awareness in human-sensors environment"	<b>Symposium</b> Shiple:; "Action and cognition: The role of gesture in symbolic spatial reasoning"	<b>Paper Session:</b>  Applied spatial cognition	
15:00 - 15:20						
15:20 - 15:40						
15:40 - 16:00						
16:00 - 16:20						
16:20 - 17:00	<b>Coffee break</b>	<b>Coffee break</b>	<b>Coffee break</b>	<b>Coffee break</b>	<b>Coffee break</b>	
17:00 - 17:20	<b>Paper Session:</b> Learning, attention and space	<b>Paper Session:</b> Space, language and perception	<b>Poster session II</b>  (Even numbers)	<b>Paper Session:</b> Cognitive neuroscience of spatial representation	<b>Paper Session:</b>  Human navigation	
17:20 - 17:40						
17:40 - 18:00	<b>Tutorial</b> Gentner: "Analogy and structure-mapping in spatial learning"	<b>Tutorial</b> Lancioni: "Promoting motor responses in persons with profound intellectual and multiple disabilities"		<b>Tutorial</b> Macaluso: "Functional neuroimaging of spatial attention"	<b>Closing of works</b>	
18:00 - 18:20						
18:20 - 18:40						
18:40 - 19:00			<b>Symposium</b> SMI SensoMotoric Instruments, Inc.: "Eye Tracking: Window to the Brain!"			
19:00 - 19:20						
19:20 - 19:40						
19:40 - 20:00						
after 20:00	<b>Classical Ballet at the National Dance Academy</b>	<b>Night Visit of Castel Sant'Angelo</b>	<b>Theatre by the Research Group on Traditional Singing and Theatre Arts</b>	<b>Social dinner at "La Limonaia", Villa Torlonia</b>	<b>Disco night at San Lorenzo</b>	

**SCIENTIFIC PROGRAM - Monday, September 14, 2009**

*Aula III*

*Aula IV*

9:00 - 12:00

*Open desk: Registration (Room VI)*

12:00 - 13:20

**Keynote lecture** (Aula Magna): Segmenting and connecting time and space  
Barbara Tversky, Stanford University

13:20 - 14:40

*Lunch time*

14:40 - 16:20

**SYMPOSIUM:** Spatial models meet spatial language: Computational and formal models  
Convenors: Joana Hois & Yohei Kurata, University of Bremen

**PAPER SESSION:** Development and ageing  
Chair: Susan Levine, University of Chicago

14:40 - 15:00 Spatial cognition through the lens of spatial language  
Michele I. Feist, University of Louisiana at Lafayette

14:40 - 15:00 Assessing orientation categorization in the left and right hemispheres of the infant brain  
Dianne Catherwood, University of Gloucestershire

15:00 - 15:20 Translating between spatial representations and spatial language using a vaguefield model  
Mark M. Hall, Cardiff University

15:00 - 15:20 Effects of ageing and selective attention on movement speed  
Martin G. Edwards, University of Birmingham

15:20 - 15:40 Description of movement from a topological viewpoint  
Yohei Kurata, University of Bremen

15:20 - 15:40 Graphic strategies in Williams syndrome and typically developing children  
Kerry Hudson, University of Reading

15:40 - 16:00 From 'location' to 'place', from 'path' to 'way': Spatiophysical constellation, spatial language, and a lexical-semantics model  
Matthias Weisgerber, University of Konstanz

15:40 - 16:00 Development of spatial cue integration between and within modalities  
M. Nardini, University of London

16:00 - 16:20 General discussion

16:00 - 16:20 The individual alpha EEG indices and nonverbal creativity in young children  
E. A. Sapina, Russian Academy of Medical Sciences

16:20 - 17:00

*Coffee break*

17:00 - 18:00

**PAPER SESSION:** Space and cognitive performance  
Chair: Thomas C. Ormerod, Lancaster University

**PAPER SESSION:** Learning, attention and space  
Chair: Dianne Catherwood, University of Gloucestershire

17:00 - 17:20 Influence of motion and itinerary control on episodic memory  
Gaëlle Plancher, Université Paris Descartes

17:00 - 17:20 Moving attention between objects and across space: How the perceptual visual characteristics influence spatial conflict resolution  
Paola Cappucci, Sapienza University of Rome

17:20 - 17:40 The effects of endogenous and exogenous spatial cueing in a sustained attention task  
Mara Sebastiani, Sapienza University of Rome

17:20 - 17:40 Compared influences of controlled and automatic spatial attentions on visuomotor priming effect  
Gérard Olivier, University of Nice Sophia-Antipolis

17:40 - 18:00 Ability of healthy subjects in orienting after imposed rotations  
Giulia Zanelli, Sapienza University of Rome

17:40 - 18:00 Attentional interference facilitates skilled anticipatory action  
Stefano Valenzi, Sapienza University of Rome and RIKEN Brain Science Institute

18:00 - 20:00

**TUTORIAL:** Using a mixed method research design  
Marcia Scherer, University of Rochester

**TUTORIAL:** Analogy and structure-mapping in spatial learning  
Dedre Gentner, Northwestern University

**SCIENTIFIC PROGRAM - Tuesday, September 15, 2009**

*Aula III*

*Aula IV*

9:00 - 11:20

**SYMPOSIUM:** Spatiotemporal music cognition  
Convenor: Petri Toiviainen, University of Jyväskylä

**PAPER SESSION:** Space and language  
Chair: Michel Denis, ECI, Université Paris Descartes

9:00 - 9:20 How movement timing and kinematics are shaped by spatial attributes of pitch during musical sequence production  
Peter E. Keller, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig

9:00 - 9:20 Towards testing route descriptions for plausibility using a Markov chain  
Andrea Bauer, Technische Universität München

9:20 - 9:40 Features of body movements during the reproduction of rhythmic patterns: The influence of the

9:20 - 9:40 Language and spatial cue integration: Evidence from verbal interference studies

	events complexity Giulio Tirinelli, Sapienza University of Rome	Judith Bek, University of Sheffield
9:40 - 10:00	Perception of expression in conductors' gestures: a continuous response study Geoff Luck, University of Jyväskylä	9:40 - 10:00 Clothing terms and the body space: A cross-linguistic analysis of image-schemas and lexical fields Maria Catricalà, Università di Roma Tre
10:00 - 10:20	Music embodied in dance: Studies of dance-like movement in different populations Jessica Phillips-Silver, Université de Montréal	10:00 - 10:20 An investigation into the semantics of English topological prepositions John Kelleher, Dublin Institute of Technology
10:20 - 10:40	Embodied metre: Hierarchical eigenmodes in spontaneous movement to music Petri Toiviainen, University of Jyväskylä	10:20 - 10:40 Spoken versus written directions Marie-Paule Daniel, Limsi - Cnrs
10:40 - 11:00	Spatial cognition of Samba and Charleston Marc Leman, Ghent University	10:40 - 11:00 Exploring the relationship between spatial language and spatial cognition using the Spanish copula estar Monica Gonzalez-Marquez, Cornell University
11:00 - 11:20	General discussion	11:00 - 11:20 Assessing perspective in human-computer route dialogues: A contextual factor model Robert J. Ross, University of Bremen
11:20 - 12:00		<i>Coffee break</i>
12:00 - 13:20	<b>Keynote lecture</b> (Aula Magna): Optimizing and satisficing in spatial problem-solving Thomas C. Ormerod, Lancaster University	
13:20 - 14:40		<i>Lunch time</i>
14:40 - 16:20	<b>SYMPOSIUM:</b> The promise and impact of technology in cognition and spatial negotiation Convenors: Cathy Bodine (University of Colorado Denver) & Marcia J. Scherer (University of Rochester)	<b>SYMPOSIUM:</b> Spatial language and spatial cognition Convenors: Dedre Gentner, Northwestern University
14:40 - 15:00	A five-year retrospective: Lessons learned about technology and cognition Cathy Bodine, University of Colorado Denver	14:40 - 15:00 The relation between spatial language and spatial thinking Susan C. Levine, University of Chicago
15:00 - 15:20	Orientation technology with direction cues or corrective feedback for indoor travel of persons with multiple disabilities Giulio Lancioni, University of Bari	15:00 - 15:20 Effects of spatial language on spatial cognition during development Dedre Gentner, Northwestern University
15:20 - 15:40	Enhancing learning through spatial cognition and awareness Susan Treichler, Arvada public school, Colorado	15:20 - 15:40 Spatial language supports spatial cognition: Evidence from deaf homesigners Susan Goldin-Meadow, University of Chicago
15:40 - 16:00	Measuring the impact of technology on spatial cognition: How, when and with whom Marcia J. Scherer, University of Rochester	15:40 - 16:00 Computational modeling at the intersection of spatial, linguistic, and conceptual knowledge Kenneth D. Forbus, Northwestern University
16:00 - 16:20	General discussion	16:00 - 16:20 General discussion
16:20 - 17:00		<i>Coffee break</i>
17:00 - 18:00	<b>PAPER SESSION:</b> Ecological spatial cognition Chair: Cathy Bodine, University of Colorado Denver	<b>PAPER SESSION:</b> Space, language and perception Chair: Albert Postma, Utrecht University
17:00 - 17:20	The effects of 'order' and 'disorder' on human cognitive perception in navigating through urban environments Alexandra Brettel, University College London	17:00 - 17:20 Photometric, figural and crossmodal factors in the perception of transparency and in depth stratification of layers Franco Delogu, RIKEN Brain Science Institute and Sapienza University of Rome
17:20 - 17:40	Investigating spatial behaviour: An application of space analysis to criminal investigations Lorenzo P. Luini, Sapienza University of Rome	17:20 - 17:40 Using space to represent data: Diagrammatic reasoning Valeria Giardino, Institut Jean Nicod (CNRS-EHESS-ENS)
17:40 - 18:00	Solid waste incineration and distance distortion: Distance estimation as an adaptation tool Sílvia Luís, University of Lisbon	17:40 - 18:00 A study on the spatial perception in contemporary Japan through the analysis of the relationship between graphic and architectural language Maria Livia Olivetti, University of Roma Tre
18:00 - 20:00	<b>POSTER SESSION I</b>	<b>TUTORIAL:</b> Promoting motor responses in persons with profound intellectual and multiple disabilities

Odd numbers

through technology-based programs  
Giulio Lancioni, University of Bary

**SCIENTIFIC PROGRAM - Wednesday, September 16, 2009**

*Aula III*

*Aula IV*

9:00 - 11:20 **SYMPOSIUM:** Environmental determinants of orientation and navigation  
Convenors: Christoph Hölscher (University of Freiburg), Anna-Maria Nenci (LUMSA),  
Renato Troffa (University of Cagliari)

9:00 - 9:20 The influence of spatial structure and configuration on behaviour: Case study of a complex school environment  
Erica Calogero, University College London

9:20 - 9:40 The relative importance of environmental factors on path choice  
John Zacharias, Concordia University

9:40 - 10:00 Escape: Wayfinding strategies and emergency  
Renato Troffa, University of Cagliari

10:00 - 10:20 How the geometry of space controls visual attention during wayfinding  
Jan Wiener, University of Freiburg

10:20 - 10:40 Location and task effects on route learning in a large-scale virtual environment  
Simon Büchner, University of Freiburg

10:40 - 11:00 Synchronization of brain dynamics with navigation behaviors in full scale, stereoscopic 3D virtual reality architecture  
Eve A. Edelman, University of California

11:00 - 11:20 General discussion

**PAPER SESSION:** Virtual environments  
Chair: Christian Freksa, University of Bremen

9:00 - 9:20 Spatial problem solving: Assembling three-dimensional puzzles in real and virtual environments  
Sarwan Abbasi, Université Paris Descartes

9:20 - 9:40 Learning a route in a virtual environment: The effects of differing cues on the performance of typical children and individuals with William syndrome  
Emily Farran, Université de Lille 3

9:40 - 10:00 Spatial learning from tactile maps and virtual GPS audio guidance: Evaluation and comparison  
James R. Marston, UC Santa Barbara

10:00 - 10:20 Barrier effects in real-world compared to virtual reality macro environments  
Eva Neidhardt, University of Lüneburg

10:20 - 10:40 Enhancing navigation performance by cognitively motivated representation of angle information in virtual environments: The case of 3D wayfinding choremes  
Denise Peters, University of Bremen

10:40 - 11:00 A visual sonified web search clustering engine  
Alessio Rugo, University of Perugia

11:20 - 12:00

*Coffee break*

12:00 - 13:20

**Keynote lecture** (Aula Magna): Spatial reasoning for intelligent action and for human-robot interaction  
Christian Freksa, University of Bremen

13:20 - 14:40

*Lunch time*

14:40 - 16:20 **SYMPOSIUM:** Music and space: A phenomenologic point of view  
Convenor: Michel Imberty, University of Paris X, Nanterre

14:40 - 15:00 Music and space in the works of Maria Elena Vieira da Silva and Emmanuel Nunes  
Jean-Marc Chauvel, Université de Reims

15:00 - 15:20 The sound dimension of the painted Palaeolithic caves  
Iégor Reznikoff, Université de Paris Nanterre La Défense

15:20 - 15:40 Categorizing musical space  
Makis Solomos, Université Montpellier 3

15:40 - 16:00 How space sounds: An inner view of space as a real compositional parameter  
Valerio Sannicandro, IRCAM Paris

**SYMPOSIUM:** Spatial and cognitive awareness in human-sensors environments  
Convenors: Tiziana Catarci & Massimo Mecella (Sapienza University of Rome),  
Marco Aiello (University of Groningen)

14:40 - 15:00 Novel techniques for voice-based spatial awareness in domestic environments  
Maurizio Omologo, ITC-IRST

15:00 - 15:20 Brain-computer interfaces (BCIs) for next-generation immersive applications  
Febo Cincotti, Santa Lucia Foundation

15:20 - 15:40 Interaction between navigation systems and human users in spatial environments  
Christian Freksa, University of Bremen

15:40 - 16:00 Cognitive vision of objects  
Arnold W. M. Smeulders, University of Amsterdam

16:00 - 16:20 Echo in music: From spatial figures to temporal figures  
Michel Imberty, University of Paris X, Nanterre

16:20 - 17:00

17:00 - 18:00 **PAPER SESSION:** Rhythm, language and motor action  
Chair: Petri Toiviainen, University of Jyväskylä

17:00 - 17:20 Actual versus perceived embodiment of a rhythmic pulse  
Geoff Luck, University of Jyväskylä

17:20 - 17:40 Contrast sets in spatial and temporal language  
Thora Tenbrink, University of Bremen

17:40 - 18:00 Failure of spatial remapping underlies constructional apraxia after right hemisphere stroke  
Russell, Brunel University and Santa Lucia Foundation

18:00 - 20:00 **TUTORIAL:** Spaces of thought  
Barbara Tversky, Stanford University

16:00 - 16:20 General discussion

*Coffee break*

17:00 - 19:00 **POSTER SESSION II**  
Even numbers

19:00 - 20:00 **SYMPOSIUM:** Eye Tracking: Window to the Brain!  
SMI SensoMotoric Instruments, Inc. (Teltow, Germany)

### SCIENTIFIC PROGRAM - Thursday, September 17, 2009

*Aula III*

*Aula IV*

9:00 - 11:20 **SYMPOSIUM:** The neurocognition of categorical and coordinate spatial relation processing  
Convenors: Ineke van der Ham & Albert Postma, Utrecht University

9:00 - 9:20 Hemispheric contribution to categorical and coordinate representational processes: A study on brain-damaged patients  
Liana Palermo, Sapienza University of Rome

9:20 - 9:40 Spatial relation processing in perceived and remembered scenes  
Ineke van der Ham, Utrecht University

9:40 - 10:00 The relationship between egocentric/allocentric frames and categorical/coordinate information  
Tina Iachini, Second University of Naples

10:00 - 10:20 Processing coordinate and categorical spatial relations with different apertures of attention  
Bruno Laeng, University of Oslo

10:20 - 10:40 Is the cerebral processing of categorical and coordinate spatial relations based on different or identical but differentially activated functional networks?  
Christine Schiltz, University of Luxembourg

10:40 - 11:00 rTMS study of categorical and coordinate processing  
Luigi Trojano, Second University of Naples

11:00 - 11:20 General discussion

**PAPER SESSION:** Spatial representation

Chair: Barbara Tversky, Stanford University

9:00 - 9:20 Alignment of spatial perspective  
Elena Andonova, University of Bremen

9:20 - 9:40 Some reflections about the so-called "mirror paradox"  
Pietro Chistolini, Technologies and Health Department, Rome

9:40 - 10:00 Effects on space representation of using a tool and a button  
Ilaria Gaudiello, University of Bologna

10:00 - 10:20 Reorientation by slope cues in humans  
Daniele Nardi, Temple University

10:20 - 10:40 The role of vision in egocentric and allocentric spatial frames of reference  
Gennaro Ruggiero, Second University of Naples

10:40 - 11:00 Mechanisms of large-scale environmental search: Probability cueing depends on the relationship between landmarks and target distribution  
Alastair D. Smith, University of Nottingham

11:00 - 11:20 The neural correlates of spatial reference frames processing  
Michal Vavrečka, Department of Cybernetics, FEL CVUT, Prague

*Coffee break*

11:20 - 12:00

12:00 - 13:20

**Keynote lecture** (Aula Magna): Orienting attention in space: Externally and internally-driven attentional capture and voluntary control  
Juan Lupiáñez, University of Granada

13:20 - 14:40

*Lunch time*

14:40 - 16:20

**SYMPOSIUM:** Gaze and cognitive control in motor performance

**SYMPOSIUM:** Action and cognition: The role of gesture in symbolic spatial reasoning

Convenor: Joan N. Vickers, University of Calgary

- 14:40 - 15:00 Mapping the constraints on visual search behaviour in sport  
A. Mark Williams, Liverpool John Moores University
- 15:00 - 15:20 Police performing and training under pressure  
Raúl R. D. Oudejans, Vrije University
- 15:20 - 15:40 Visuo-motor control in far aiming tasks: Re-examining the location suppression hypothesis  
Mark Wilson, University of Exeter
- 15:40 - 16:00 Quiet eye control strategies in interceptive timing actions  
Derek Panchuk, Victoria University
- 16:00 - 16:20 Gaze and shooting performance of police officers in a force on force encounter  
Joan N. Vickers, University of Calgary

16:20 - 17:00

**PAPER SESSION:** Cognitive control in space

Chair: Juan Lupiañez, University of Granada

- 17:00 - 17:20 Geometry and space: The spatial-angle association of response codes (S.A.N.A.R.C. effect)  
Antonia Fumarola, University of Trieste
- 17:20 - 17:40 Task complexity modulates trade-off between locomotion and working memory usage in a large copying paradigm  
G. Hardiess, University of Tübingen
- 17:40 - 18:00 Solving three spatial conflict types as a time: Evidence for multiple conflict control mechanisms  
Maria Jesus-Funes, University of Granada
- 18:00 - 20:00 **TUTORIAL:** Understanding events, space and action: The role of segmentation and grouping  
Thomas F. Shipley, Temple University

Convenor: Thomas F. Shipley, Temple University

- 14:40 - 15:00 Gesture training leads to improvement in children's mental rotation skill  
Susan C. Levine, University of Chicago
- 15:00 - 15:20 Gesture changes thought by grounding it in action  
Susan Goldin-Meadow, University of Chicago
- 15:20 - 15:40 Gesture lends a hand to spatial communication  
David Uttal, Northwestern University
- 15:40 - 16:00 Thinking with gestures  
Angela Kessel, Columbia University
- 16:00 - 16:20 General discussion

Coffee break

**PAPER SESSION:** Cognitive neuroscience of spatial representation in imagery and perception

Chair: Alberto Priori, University of Milan

- 17:00 - 17:20 Action simulation and spatial representation: An ERPs analysis applied to a motor imagery task  
Michela Balconi, Catholic University of Milan
- 17:20 - 17:40 Gestalt's principles in the brain: Left frontal-eye-field and the rule of good continuation  
Gianluca Campana, University of Padua
- 17:40 - 18:00 Mental imagery generation in different modalities activates sensory-motor areas  
Massimiliano Palmiero, Sapienza University of Rome and Riken Brain Science Institute, Tokyo
- TUTORIAL:** Functional neuroimaging of spatial attention  
Emiliano Macaluso, Santa Lucia Foundation

### SCIENTIFIC PROGRAM - Friday, September 18, 2009

#### Aula III

- 9:20 - 11:20 **TUTORIAL:** Exogenous vs. endogenous spatial orienting  
Juan Lupiañez, University of Granada

11:20 - 12:00

**PAPER SESSION:** Cognitive neuroscience of action and space

Chair: Emiliano Macaluso, Santa Lucia Foundation

- 12:00 - 12:20 Voluntary modification of musical execution by neurofeedback training  
O. M. Bazanova, Russian Academy of Medical Sciences
- 12:20 - 12:40 Spatial and temporal cognition for the sense of agency: Neuropsychological evidences  
Michela Balconi, Catholic University of Milan
- 12:40 - 13:00 Motor control in young patients with unilateral brain lesions: An MEG study  
Paolo Belardinelli, Helsinki University of Technology
- 13:00 - 13:20 Neural encoding underlying human action understanding and decision processes spread beyond the cerebral cortex: The dynamics of basal ganglia oscillations

#### Aula IV

- TUTORIAL:** Remembering where you have been help remembering what you have done: The shared neuro-cognitive basis between spatial and episodic memory  
Albert Postma, Utrecht University

Coffee break

**PAPER SESSION:** Spatial cognition in robotic agents

Chair: Falko Schmid, University of Bremen

- 12:00 - 12:20 Spatial language for route-based humanoid robot navigation  
Mohammed Elmogy, University of Hamburg
- 12:20 - 12:40 A study on a shared control navigation system: Human/Robot collaboration for assisting people in mobility  
Francesco Galluppi, Sapienza University of Rome
- 12:40 - 13:00 Spatial processes in mobile robot tele-operation  
Alberto Valero-Gomez, Sapienza University of Rome
- 13:00 - 13:20 Place cognition as an example of situated cognition: A study with evolved agents  
Orazio Miglino, University of Naples "Federico II"

Alberto Priori, University of Milan

13:20 - 14:40

14:40 - 16:20

**SYMPOSIUM:** Emotion, motivation and cognition in human wayfinding behavior

Convenor: Francesca Pazzaglia, University of Padua

14:40 - 15:00 Anxiety dependent spatial navigation strategies in virtual and real space

János Kállai, University of Pécs

15:00 - 15:20 Influence of motivation on wayfinding

Samvith Srinivas, University of Pittsburgh

15:20 - 15:40 A neural mechanism underlying successful wayfinding

Gabriele Janzen, Radboud University and Donders Institute for Brain

15:40 - 16:00 Clinical and rehabilitation approach to navigation and spatial representation deficits: Description of a patient with posterior cortical atrophy

Simona Gardini, University of Parma

16:00 - 16:20 Route-learning in young and older subjects in a virtual town

Valerie Gyselinck, University of Padua

16:20 - 17:00

17:00 - 19:40

**DOCTORAL COLLOQUIUM**

Chair: Antonino Raffone, Sapienza University of Rome

17:00 - 17:25 Influence of manual and ocular motor preparations on tactile and visual attention efficiency

Alexandre Coutté, University of Nice Sophia-Antipolis

17:25 - 17:50 Using a virtual environment in assessing environmental spatial abilities

Nurul Mohd Noor, Lancaster University

17:50 - 18:15 Neuropsychology of spatial imagery: Visual mental imagery and perception in subject with acquired brain damage

Serena Oliveri, Catholic University of Milan

18:15 - 18:40 Avoid me - A spatial movement concept in human-robot-shared environments

Annika Peters, Bielefeld University

18:40 - 19:05 Evaluation of distances in virtual environments: Differences in visualization systems

Chiara Saracini, Sapienza University of Rome

19:05 - 19:30 Use of a motorized platform and an instrumented helmet to analyze the head kinematics during equilibrium perturbation

Giulia Zanelli, Sapienza University of Rome

19:40 - 20:00

*Lunch time*

**PAPER SESSION:** Applied spatial cognition

Chair: Thomas F. Shipley, Temple University

14:40 - 15:00 Considerations in designing research to evaluate wayfinding technologies

James R. Marston, UC Santa Barbara

15:00 - 15:20 Aging in mental representation from spatial descriptions: Role of spatial perspective and visuo-spatial ability

Chiara Meneghetti, University of Padua

15:20 - 15:40 A model to characterise re-orientation strategies in natural orifice transluminal endoscopic surgery (NOTES)

Mikael H. Sodergren, Imperial College London

15:40 - 16:00 Surgical wayfinding and navigation processes in the human body

Thomas Stüdeli, Delft University of Technology

16:00 - 16:20 Developing spatial skills for adolescents

Sheryl Sorby, Michigan Technological University

*Coffee break*

**PAPER SESSION:** Human navigation

Chair: Joan N. Vickers, University of Calgary

17:00 - 17:20 Background knowledge in human navigation: A case study in a supermarket

Christopher Kalf, University of Freiburg

17:20 - 17:40 How fine-grained spatial analyses help us understand navigation behavior and performance with maps

Gregory Kuhnmuensch, University of Freiburg

17:40 - 18:00 Street morphology and its effects on pedestrian movement in historical Cairo

Nabil Mohareb, United Arab Emirates University

18:00 - 18:20 Trajectory reconstruction with human behavioral route choice heuristics

Falko Schmid, University of Bremen

18:20 - 18:40 Changes in spatial anxiety when learning a new environment

Valeria Tierno, Utrecht University and Sapienza University of Rome

18:40 - 19:00 Cognitive mapping analysis and regional identity

Renato Troffa, University of Cagliari

19:00 - 19:20 Influences of map view and environmental conditions on mental maps of map users

Markus Wunderlich, University of Bonn

*Closing of works*

## SCIENTIFIC PROGRAM - Saturday, September 19, 2009

*Faculty of Engineering*

11:00 - 12:30

Presentation of the activities of CIRPS (Interuniversity Center for Research on Sustainable Development)

12.30

*Farewell Lunch, hosted by CIRPS*



**SCIENTIFIC PROGRAM - Poster Sessions**

*Aula III - Tuesday, September 15, 18:00 - 20:00*

*Aula IV - Wednesday, September 16, 17:00 - 19:00*

- 1 Video game play changes spatial and verbal memory: Rehabilitation of a single case with traumatic brain injury  
Marcella Caglio, University of Turin
- 3 Planned behavior and "local" norms: an analysis of the space-based aspects of normative ecological behaviour  
Giuseppe Carrus, University of Roma Tre
- 5 Line bisection performances in depressives  
Andrei Dumbrava, Al.I. Cuza University
- 7 Visual and verbal creativity, and their relationship with visuo-spatial and verbal proficiency  
Massimiliano Palmiero, Sapienza University of Rome and RIKEN Brain Science Institute
- 9 Visual search and visual feedback in Williams syndrome and typical development  
Susan Formby, University of Reading
- 11 Employing eye-gaze and arrow as cue to attention: Two different modes of attentional selection  
Andrea Marotta, Sapienza University of Rome
- 13 The situational influence of location and body orientation on the recall of survey knowledge  
Tobias Meilinger, Max-Planck-Institute for Biological Cybernetics
- 15 A meta-analysis of environmental spatial abilities  
Nurul Mohd Noor, Lancaster University
- 17 Pure imagery neglect for places and for objects  
Liana Palermo, Sapienza University of Rome
- 19 Embodying spatial relations in action and perception: a computational model  
Ivan I. Vankov, New Bulgarian University
- 21 From visual perception to place  
Johannes Wolter, University of Bremen
- 23 Short and long-term correlations in repetitive movements  
Irene Ruspantini, Technologies and Health Department, Rome
- 25 Monitoring changes in the spread of spatial attention following loss of situation awareness  
Graham K. Edgar, University of Gloucestershire
- 27 Word retrieval activations related to the contextual spatial tasks (Navigation and Allocentric) performed during their encoding: Preliminary fMRI results  
Alice Gomez, Université Pierre Mendès-France
- 29 Which kind of attention is necessary for perceiving gaze direction? Evidence from the locus-of-slack method  
Paola Ricciardelli, University of Milano - Bicocca
- 31 What kind of mental images are spatial forms?  
Mark Price, University of Bergen

- 2 Effects of action observation on movement execution  
Robert Hardwick, University of Birmingham
- 4 The effect of age on egocentric and allocentric spatial frames of reference  
Tina Iachini, Second University of Naples
- 6 How do we use distance representation based on spatial terms?  
Takatsugu Kojima, Kyoto University
- 8 Eye movements and mental models in reasoning with cardinal directions  
Maren Lindner, University of Bremen
- 10 A virtual reality based tool for the assessment of "survey to route" spatial organization ability in elderly population: Preliminary data  
Francesca Morganti, University of Bergamo
- 12 Hearing the "time is space" conceptual metaphor: A cross-cultural study  
Marc Ouellet, University of Granada
- 14 Age differences in spatial orientation ability: What is preserved in the elderly?  
Felicia Fiore, University of Padua
- 16 Age and sex differences in a virtual version of the reorientation task  
Luciana Picucci, University of Bari
- 18 On the role of conceptual and linguistic ontologies in the production of wayfinding dialogues  
Robert J. Ross, University of Bremen
- 20 Interaction between egocentric and allocentric frames of reference  
Francesco Ruotolo, Second University of Naples
- 22 Line bisection performances in apathy versus depression  
Andrei Dumbrava, Al.I. Cuza University
- 24 Multimodal device for assessing children orienting behavior in ecological environments  
Giuseppina Schiavone, Campus Bio-Medico, Rome
- 26 Construction of complex mental images  
Jan Frederik Sima, University of Bremen
- 28 Reference frame activation in spatial language: temporal dynamics  
Marijn E. Struikma, Utrecht University
- 30 Architecture as interaction factor on virtual museums design  
Talita Christine P. Telma, Freiburg University
- 32 Components of visual neglect: Attentional bias vs. spatial working memory impairment  
Monica Narcisa Toba, Université Pierre et Marie Curie-Paris6 and Inserm, U975, Paris