

ICSC 2012 – Conference Program

Conference site:
Faculty of Medicine and Psychology, Via dei Marsi 78, 00185 Roma

Tuesday, September 04

REGISTRATION, Aula VI, from 09:00

WELCOME ADDRESSES, Aula Magna, 11:45

KEYNOTE LECTURE, Aula Magna, 12:15

Alain Berthoz

Neural basis of changing perspective in spatial orientation and navigation. Implication for empathy

LUNCH BREAK

Aula III

Aula IV

POSTER SESSION 1

Navigation

1. Vavrečka & Lhotská: *The alteration of reference frames in a vertical navigation*
2. Skagerlund, Kirsh & Dahlbäck (WITHDRAWN)
3. Labadi & Vagvolgyi: *Development of navigation: Encoding of geometric and non-geometric properties of spatial environment in children*
4. van Hoogmoed, Wegman, van den Brink & Janzen: *The development of landmark use during navigation*
5. Sonntag, KuhnMünch, Ragni, Ferstl & Hölscher: *Gender effects in map-comprehension and self-localization*
6. Palermo, Foti, Ferlazzo, Guariglia, & Petrosini: *I know how to explore a maze, but not my district! Navigational strategies in Developmental Topographical Disorientation*
(POST-DOCTORAL PRESENTATION)

SYMPOSIUM 1

Building spatial knowledge from language,

Convenors: Michel Denis & Marios N. Avraamides

- Gyselinck, Daniel, Gras, Hickman & Piolino: *Visual and verbal information in spatial models: Modes of intake and types of output*
- Galati & Avraamides: *Coordinating in spatial perspective-taking: How speakers' description strategies affect their partners' memory representations*
- Pazzaglia & Meneghetti: *Spatial representations derived from route and survey descriptions: Similarities and differences*
- Daniel & Denis: *Active and passive navigation: Effects on spatial models and route descriptions*
- Wiener, Tenbrink & Hölscher: *Would you follow your own route description?*

14:30-15:20

POSTER SESSION 2

Navigation

1. Chersi & Pezzulo: *Using hippocampal-striatal loops for spatial navigation and goal-directed decision making*
2. De Bartolo, Burello, Mandolesi & Petrosini: *Spatial abilities and c-fos expression in hippocampal formation of enriched rats*
3. Kettunen, Irvankoski, Krause & Sarjakoski: *Use of landmarks in nature: differences between seasons and data collection methods*
4. Li: *Different spatial terms in navigation system for Chinese drivers*
5. Purser, Farran, Courbois, Mellier, Sockeel, & Blades: *Route learning and landmark use in typical development, Down syndrome and Williams syndrome, in virtual environments*

SYMPOSIUM 2

Perception and representation of vertical spaces

Convenor: Daniele Nardi

15:20-15:40

- Durgin & Li: *Angular scale expansion and action space*

15:40-16:00

- Weisberg, Brakoniec & Newcombe: *The other side of the mountain: Slope as a cue in navigation*

16:00-16:20

- Nardi: *Does terrain slope really dominate goal searching?*

16:20-16:40

- Burt De Perera: *The vertical component of fishes' representation of space*

16:40-17:00

- Jeffery: *Is the cognitive map flat? Studies of the neural representation of three-dimensional space*

COFFEE BREAK

SYMPOSIUM 3

Peripersonal space representation in the primate brain

Convenor: Elisabetta Ladavas

- Ben Hamed: *Multisensory space representation within the non-human primate intraparietal sulcus (IPS)* **17:30-17:50**
- Brozzoli, Gentile & Ehrsson: *Neural bases of peripersonal space in humans revealed by fMRI-adaptation* **17:50-18:10**
- Bassolino, Finisguerra, & Pozzo: *The role of action in space and body representations* **18:10-18:30**
- Serino & Canzoneri: *Plasticity in peripersonal space representation: effects of body extension and body incorporation* **18:30-18:50**
- Teneggi, Canzoneri, Serino & di Pellegrino: *Social modulation of multisensory processing in peripersonal space* **18:50-19:10**
- 19:10-19:30**
- 19:30-19:50**

ORAL SESSION 1

Spatial concepts and language

Chair: Daniele Nardi

- Stocker: *Mental spacetime and embodiment*
- Klippel, Wallgrün, Yang, Li & Dylla: *Formally grounding spatio-temporal thinking*
- Burigo & Knoeferle: *Visual attention in spatial language comprehension*
- Kaup, de Filippis, Lachmair, de la Vega, & Dudschig: *When up-words meet down-sentences: Evidence for word- or sentence-based compatibility effects?*
- Song & Schnotz: *Space: A view of linguistic psychology - Evidence from English preposition: "in", "on" and "at"*
- Morel, Postma & Zwarts: *Sensitivity to reference frame invariance in processing topological and spatial prepositions*
- Soroli: *Variation in spatial language and cognition: Exploring visuo-spatial thinking and speaking cross-linguistically*

Wednesday, September 05

Aula III

SYMPOSIUM 4

Bodily awareness and embodied mental transformations of egocentric space

Convenor: Klaus Kessler

- Aspell, Palluel, Lenggenhager & Blanke: *Multisensory conflicts modulate spatial aspects of bodily self-consciousness* **8:30-8:50**
- Braithwaite & Brogna: *Exploring embodiment and perspective-taking in reports of out-of-body experiences in the non-clinical population* **8:50-9:10**
- CreemRegehr, Gagnon, Tarampi & Stefanucci: *The influence of spatial cues on instructed and spontaneous spatial perspective taking* **9:10-9:30**
- Grabherr, Falconer & Mast: *Bodies in space: Mental transformation and vestibular information processing* **9:30-9:50**
- Kessler & Wang: *Differently embodied transformations in visuo-spatial perspective taking* **9:50-10:10**

Aula IV

SYMPOSIUM 5

Learning with and about spatial visualization

Convenor: David Uttal

- Cohen & Uttal (WITHDRAWN)
- Forbus, Chang & Wetzel: *Sketching for learning: Computer-based coaching of student-created visual representations*
- Simms, Gentner & Uttal: *Young children's learning and spatial relations: Comparing maps and spatial language*
- Wilkerson, Meadow, Kolvoord, Senior, Tushman & Uttal: *Expanding spatial thinking via geospatial technologies within project-based curricula*
- Yuan, Uttal, Gentner & Sheehan: *The effect of analogy and relational language on preschooler's map learning*

COFFEE BREAK

SYMPOSIUM 4

Bodily awareness and ... (continued)

- Surtees, McCleery, Utz & Apperly: *The neural and cognitive time course of resolving conflict between perspectives* **10:40-11:00**
- Wallentin: *The role of the brain's frontal eye fields in constructing frame of reference* **11:00-11:20**
- May & Wendt: *Separating mental transformations and spatial compatibility effects in the own body transformation task* **11:20-11:40**
- Yu & Zacks: *Off with his head! The role of embodied transformations in perspective taking* **11:40-12:00**

SYMPOSIUM 6

A probabilistic perspective on understanding spatial information processing in the mammalian brain

Convenor: Thomas Wolbers

- Fetsch, Gu, De Angelis, & Angelaki: *From neurons to behavior in self-motion perception: merging theoretical and empirical approaches in a multisensory paradigm*
- Beck: *Probabilistic neural theories of multisensory integration*
- Nardini: *Bayesian integration of spatial information in development*
- Wolbers, Smith & Muckli: *Heading computations in the human brain – Insights from psychophysics and functional neuroimaging*

KEYNOTE LECTURE, Aula Magna, 12:15

Karl Friston

Active inference and spatial cognition

LUNCH BREAK

POSTER SESSION 3

Space representation

1. Ruggieri & Cocchia: *Space contraction experiences during acoustic metronomic stimulation: A synthetic discussion*
2. Seraglia, Priftis, Cutini, & Gamberini: *How tool-use and arm position affect peripersonal space representation*
3. Nys, Gyselinck, Hickmann & Orriols: *Which direction to take? Cognitive and linguistic factors in children's spatial representations of virtual itineraries*
4. Ziegler, Johannsen, Swadzba, de Ruiter & Wachsmuth: *Exploiting spatial descriptions in visual scene analysis*
5. Meneghetti, Pazzaglia & De Beni: *Which spatial abilities and strategies predict males' and females' performance in the Object Perspective Test?*
6. Rizza & Price: *Do sequence-space synaesthetes have better spatial imagery skills? Maybe not.*
7. Ruiz Fernandez & Rahona: *The spatial flexibility of time – A direct comparison of spatial representations of time*
8. Vermeulen, Chang, Corneille, Pleyers & Mermillod: *Verifying properties of concepts spontaneously requires sharing resources with same-modality percept*
9. Matlen, Göksun, Atit, Rau & Ptouchkina: *Do gesturing and sketching influence spatial cognition through similar mechanisms?*
10. Ruggiero, Ruotolo & Iachini: *Egocentric/allocentric and coordinate/categorical haptic encoding in blind people*
11. Stocker: *Toward an embodiment–disembodiment taxonomy*
12. De Filippo, Cutini, Lisi & Zorzi (MOVED TO POSTER SESSION 7)
13. Tieri, Pavone, Rizza, Tidoni, Grisoni, & Aglioti: *Brain monitoring of erroneous actions performed by an avatar: An EEG study in immersive virtual reality* (DOCTORAL PRESENTATION)

SYMPOSIUM 7

Functional subdivision of perceptual space in the visual field

Convenors: Yan Bao & Ernst Pöppel

- Bao, Wang & Pöppel: *Spatial orienting in the visual field: A unified perceptual space?* **15:20-15:40**
- Lei, Bao, Wang & Gutyrchik: *fMRI correlates of inhibition of return in perifoveal and peripheral visual field* **15:40-16:00**
- Li, Liu & Bao: *ERP evidence for different inhibitory mechanisms in the visual field* **16:00-16:20**
- Zhou, Sander, Trahms, Pöppel & Bao: *Eccentricity effect of MEG signals to peripheral visual stimuli* **16:20-16:40**
- Pöppel, Bao, Zhou, Mao, & Gutyrchik: *The visual field paradox: A theoretical account on the reafference principle providing a common frame for the homogeneity and inhomogeneity of visual representation* **16:40-17:00**

14:30-15:20

POSTER SESSION 4

Body, attention, and space

1. Palluel, E. Aspell, Lavanchy & Blanke: *Modulation of bodily self-consciousness with proprioceptive alteration at the lower limbs*
2. Grade, Pesenti & Gareth Edwards: *The influence of action on reachability judgements and spatial magnitude estimation*
3. Palluel-Germain, Morgado, Osiurak & Gentaz: *Physical constraints of action matter: Their effect on perceived distances*
4. Morganti, Marracki, Urban & Riva: *Topographical orientation in Parkinson's disease: The role of embodiment in performing the VR Road Map Test*
5. Falconer, Lopez & Mast: *Being moved by the self and others*
6. Van Brussel, Grade, Gareth Edwards & Macq: *Body and action distortion techniques using a Virtual Embodiment System*
7. Kirsch & Cross: *Action embodiment during observation of classical ballet and contemporary dance: Considerations from brain and behavioral data*
8. Finisguerra, Bassolino, Serino & Pozzo: *Action tunes body dimension in space: evidences from non-use and overuse*
9. Shaki: *What's in a kiss? Spatial experience shapes directional bias during kissing*
10. Scorolli, Miatton, Wheaton & Borghi: *When a glass calls: Anatomy of a toast*
11. Brigadoi, Cutini, Scarpa, Scatturin & Dell'Acqua: *Exploring the role of primary and supplementary motor areas in simple motor tasks with fNIRS*
12. Janyan & Slavcheva: *When left feels right: Asymmetry in the affordance effect*
13. Scozzafava, Raffone, Santangelo, Cappa, Olivetti Belardinelli: *Grasping influence on reaching in static and dynamic condition in healthy adults* (DOCTORAL PRESENTATION)

ORAL SESSION 2

Affordance and body awareness

Chair: Anna Borghi

- Kostov & Janyan: *The role of attention in the affordance effect: Can we afford to ignore it?*
- Dixon, Goslin & Ellis: *Affordance effects in the absence of the intention to act on seen objects*
- Vergilova & Janyan: *Combining motor and spatial affordance effects with the divided visual field paradigm*
- Raffone: *Body and space in awareness and mindfulness meditation: neural correlates and neuro-cognitive modeling*
- Le Cornu Knight, Longo & Bremner: *The categorical segmentation of body representations: A difference in tactile spatial acuity at anatomical landmarks?*

COFFEE BREAK

SYMPOSIUM 8

Spatial strategies in primates: Decision making in large-scale and small-scale space

Convenors: Paul L. Garber & Francine L. Dolins

- Garber & Dolins: *Introduction to the Symposium: Spatial cognition in non-human primates: The scope of the problems facing free-ranging and captive primates orienting to and navigating in small- and large-scale space* **17:30-17:50**
- Garber & Porter: *Using multiple maps: Temporal changes in route-based travel in wild Bolivian saddleback tamarins (*Saguinus fuscicollis weddelli*)* **17:50-18:10**
- Urbani & Garber: *Foraging decisions in large- and small-scale space in wild white-faced capuchin monkeys (*Cebus capucinus*)* **18:10-18:30**
- Janmaat, Ban, Boesch: *Do Thai chimpanzees use botanical knowledge in their search for fruit in large-scale space?* **18:30-18:50**
- Dolins & Menzel: *Comparing captive chimpanzees' navigational strategies and spatial memory in virtual small- and large-scale space* **18:50-19:10**
- Call & Hribar: *Great apes' strategies for locating hidden objects in small-scale space* **19:10-19:30**
- De Lillo & James: *Spatial working memory for clustered and linear configurations of sites in a virtual reality foraging task* **19:30-19:50**

ORAL SESSION 3

Gesture and motion

Chair: Barbara Tversky

- Mele & Federici: *Gaze and eye-tracking solutions for psychological research*
- Deininger, Loudon, & Norman: *Modal preferences in creative problem solving*
- Yamamoto: *The role of active locomotion in space perception*
- Chu & Kita: *The nature of the beneficial role of spontaneous gesture in spatial problem solving*
- Jamalian, Giardino & Tversky: *Gestures for spatial reasoning*
- Andonova & Taylor: *Nodding in (dis-)agreement: A tale of two cultures*
- Huetter, Winter, Matlock & Spivey: *Processing motion implied in language: Eye-movement differences during aspect comprehension*

Thursday, September 06

Aula III

SYMPOSIUM 9

Thinking with, in, and about space

Convenors: Barbara Tversky & Susan Levine

- Gentner, Levine, Goldwater & Ping: *Spatial alignment and spatial language contribute to learning about engineering* **8:30-8:50**
- Goldin-Meadow, Ping, Decatur, Larson & Zinchenko: *Gesture predicts readiness-to-learn in adults learning a complex spatial task* **8:50-9:10**
- Jamrozik & Gentner: *Spatial metaphors: Aspects of concrete spatial meaning are retained in abstract contexts* **9:10-9:30**
- Levine, Congdon, Kwon & Ping: *The role of embodiment in children's understanding of units of measure* **9:30-9:50**
- Tversky, Jamalian & Kang: *Some ways gestures guide thought* **9:50-10:10**

COFFEE BREAK

SYMPOSIUM 11

Perception, memory and action in a multisensory space

Convenors: Franco Delogu & Ineke van der Ham

- Brunetti & Del Gatto: *Cross-modal and intra-modal binding between identity and location in spatial working memory* **10:40-11:00**
- Delogu, Gravina, Bergman Tiest, Nijboer, Kappers & Postma: *Object location memory in haptics* **11:00-11:20**
- Newell: *Does vision rule the senses in spatial cognition?* **11:20-11:40**
- van Der Ham, Zenka & van Der Kuil: *Contribution of auditory and visual cues to navigation* **11:40-12:00**

Aula IV

SYMPOSIUM 10

Space and embodied cognition of number and quantity

Convenor: Martin H. Fischer

- Fischer: *A hierarchical view of grounded, embodied, and situated numerical cognition*
- Moeller, Fischer, Link, Wasner, Huber, Cress, & Nuerk: *Learning and development of embodied numerosity*
- Andres: *Neuroscience of embodied numerical cognition*
- Brugger, Frey, Fehr & Loetscher: *From number lines to time lines - How "numerical" is the mental number line?*
- De Cruz: *How do spatial representations enhance cognitive numerical processing?*

SYMPOSIUM 12

Body perception, peripersonal space, and pain: Clinical findings and conceptual aspects

Convenor: Jörg Trojan

- Trojan & Flor: *The role of body image and peripersonal space in pain*
- Diers, Ziegglänsberger, Trojan & Flor: *See your pain: Site-specific visual feedback reduces pain perception*
- Valenzuela-Moguillansky: *Pain and disturbances in body awareness*
- Torta: *If you cross your arms, it hurts less: Neural correlates of the 'crossed hands' analgesia*

KEYNOTE LECTURE, Aula Magna, 12:15

Marc Ernst

Human multisensory perception and action - Putting the puzzle together

LUNCH BREAK

POSTER SESSION 5

Attention and multisensory integration

1. Dudschig, Lachmair, de la Vega, De Filippis & Kaup: *From top to bottom: Spatial shifts of attention caused by linguistic stimuli*
2. LeBigot & Grosjean: *Exogenous and endogenous shifts of visuospatial attention in perihand space*
3. Longstaffe, Gilchrist & Hood: *Inhibition, attention and working memory in large scale search*
4. Porcu & Mueller: *Steady state visual evoked potentials as an index of common attentional capacity between vision and touch*
5. Rinaldi, Di Luca, Henik & Girelli: *Reading direction shifts visuo-spatial attention: When attentional biases are culturally based*
6. Pang, Porcu & Müller: *The role of peripersonal space in tactile sustained attention*
7. Hach, Ott & Schuetz-Bosbach: *Visuo-tactile integration in personal, peripersonal and extrapersonal space*
8. Butz, Belardinelli & Ehrenfeld: *Modeling bodystate-dependent multisensory integration*
9. Ruotolo, Senese, Ruggiero, Maffei, Masullo & Iachini: *Individual reactions to a multisensory Immersive Virtual Environment: The impact of a windfarm on individuals*
10. Fiori, Aglioti, David: *Yoga practice and body-related sensory conflict-monitoring*
(DOCTORAL PRESENTATION)

SYMPOSIUM 13

Embodied aesthetics: Visual and sensorimotor components of aesthetic experience

Convenors: Luca F. Ticini & Cosimo Urgesi

- Calvo-Merino, Jones, Gillmeister, Tziraki & Forster: *The influence of experience on aesthetic processing: Insight from ballet dancers watching dance postures*
- Cross: *The embodied aesthetics of watching dance*
- Orgs & Haggard: *Learning to like it: Aesthetic perception of choreographic patterns*
- Ticini, Novembre, Waszak, Schuetz-Bosbach & Keller: *Embodied aesthetics: Audiomotor representation of music in experts and laypersons*
- Urgesi, Mele & Cazzato: *TMS investigations of the influence of body form and body action representations on body aesthetic perception*

14:30-15:20

POSTER SESSION 6

Perception, time and memory

1. Cerles & Rousset: *Bias in self-motion perceived speed can enhance episodic memory*
2. Cerles, Gomez & Rousset: *Effect of egocentric perception on an allocentric memory task*
3. Dutriaux & Gyselinck: *Motor simulation in the memory of a spatial model: The effect of the mass of objects*
4. Artuso & Palladino: *Spatial effects in working memory binding updating*
5. Ouellet, Spatola, Sémery, Beffara, Mermillod & Santiago de Torres: *When the sad past is left*
6. de la Fuente, Santiago, Román, Dumitrache & Casasanto: *Facing the past: Cognitive flexibility in the front-back mapping of time*
7. Loetscher, Tamagni, Baumann, Nicholls & Brugger: *Impaired memory for early relative to late events in spatial neglect*
8. Mulas, Troffa & Caddeo: *Differences between experts and non-experts in photographic perception and assessment*
9. Lunven, Glize, Bartolomeo, Thiebaut, Jacquin-Courtois & Rode: *Normal line bisection and impaired target cancellation in a patient with predominantly posterior brain damage*
10. Ganczarek, Ruggieri, Giannini, Olivetti Belardinelli: *Body sway in pictorial depth perception*
(DOCTORAL PRESENTATION)

ORAL SESSION 4

Development

Chair: Dedre Gentner

15:20-15:40

- Begum, Cowie & Bremner (WITHDRAWN)

15:40-16:00

- Frick & Moehring: *Effects of manual experience on 4- to 11-month-olds' mental object rotation*
- Ping, Young, Ratliff, Schiffman & Levine: *Tracing the development of cross-sectioning ability in three- to nine-year old children*

16:00-16:20

- van den Brink & Janzen: *Developmental shift in spatial coding in two-year-old children*

16:20-16:40

- Ramirez, Gunderson, Levine & Beilock: *Spatial anxiety, spatial ability, and working memory in early elementary school*

16:40-17:00

COFFEE BREAK

FILM SESSION

Documentary about the life of a person in persistent vegetative state

"La vita degli altri" (with English subtitles)
by Gabriele Galli

Presentation: Marta Olivetti

Discussant: Giulio Lancioni

17:30-17:50

17:50-18:10

18:10-18:30

18:30-18:50

ORAL SESSION 5

Aging

Chair: Thomas Wolbers

- Gras, Gyselinck, Daniel, Labiale & Piolino: *The effect of aging on route memorization*
- Harris, Wiener & Wolbers: *Older people exhibit a specific deficit in navigational strategy switching*
- Russell, Spencer, Musil & Malhotra: *Failure of spatial representation contributes to memory decline during ageing*
- Bates & Wolbers: *Bayesian optimal cue integration is preserved in old age*

SOCIAL DINNER

Friday, September 07

Aula III

SYMPOSIUM 14

Peripersonal space: The boundary between body, objects and events

Convenor: Tina Iachini

- Coello, Bourgeois & Iachini: *Embodied perception of reachable space: How do we manage threatening objects?* **8:30-8:50**
- Pearson, Smith & Ball: *Do eyes have it? The relationship between the eye movement system and spatial memory* **8:50-9:10**
- Postma, Struiksmá & Noordzij: *Talking about what you feel: Space, language and touch in blind and sighted individuals* **9:10-9:30**
- Iachini, Vinciguerra, Ruotolo & Ruggiero: *Ready to act and react: Hands in peripersonal space* **9:30-9:50**
- Farnè, Cardinali, Brozzoli & Roy: *Hand a(s) tool to go beyond the body* **9:50-10:10**

Aula IV

SYMPOSIUM 15

Multisensory and emotional space in art and science

Convenor: Isabella Pasqualini

- Dieguez: *Doubles everywhere: Belletristic contributions to the science of the bodily self*
- Ottiger: *The artist in the studio – Immersion into the body of the avatar*
- Viaud-Delmon: *Emotion, multisensory integration and space perception: When space is felt too small or too big*
- Pasqualini & Blanke: *The architectonic self – own body perception and feelings in architectonic space*
- Zschocke: *Art and architecture as experience. An alternative approach to bridging art history and the neurosciences*

COFFEE BREAK

SYMPOSIUM 14

Peripersonal space: ... (continued)

- Dobricki, Mohler & Bühlhoff: *The ownership of a virtual body induced by visuo-tactile stimulation indicates the alteration of self-boundaries* **10:40-11:00**
- Frassinetti, Gessaroli, Santelli & di Pellegrino: *Interpersonal space in autism spectrum disorders* **11:00-11:20**
- Keizer, Smeets, Dijkerman, van Elburg & Postma: *Body schema in Anorexia Nervosa* **11:20-11:40**

SYMPOSIUM 16

Motor and spatial cognition in minimally conscious states

Convenors: Niels Birbaumer & Giulia Liberati

- Kotchoubey, Yu, Markl, Müller, Vogel & Lang: *Motor and spatial imagery in severe disorders of consciousness*
- Lancioni, Singh, O'Reilly, Sigafos & Olivetti Belardinelli: *Technology-based intervention to help persons with minimally conscious state and pervasive motor disabilities perform environmentally-relevant adaptive behavior*
- Liberati & Birbaumer: *Using Brain-Computer Interfaces to overcome the extinction of goal-directed thinking in Minimally Conscious State patients*
- Piccione, Genna, Dotta, Fusaro, Silverio & Cavinato (WITHDRAWN)

KEYNOTE LECTURE, Aula Magna, 12:15

Michael Spivey

The spatial intersection of minds

LUNCH BREAK

POSTER SESSION 7

Language and number processing

1. Marmolejo-Ramos, Elosúa, Yamada, Hamm & Noguchi: *The appraisal of space words by speakers from diverse linguistic backgrounds*
2. Tyborowska, Wegman & Janzen: *Spatial cue use in bilinguals and monolinguals: An fMRI study*
3. Crollen, Dormal, Seron, Lepore & Collignon: *Embodied numbers: The role of vision in the development of number-space interactions*
4. Ranzini, Lisi, Pitteri, Treccani, Priftis & Zorzi:

14:30-15:20

POSTER SESSION 8

Emotion, imagery, and creativity

1. Beffara, Ouellet, Vermeulen, Basu, Tiffany, & Mermillod: *Enhanced embodied response following ambiguous emotional processing*
2. Tapiero & Karakaya: *Embodied cognition and emotion: How readers' implication affect the representation of emotions*
3. Tsagkila & van der Ham: *Effects of affect, stress, and anxiety on spatial cognition*
4. Morgado, Palluel-Germain, Muller & Gertaz: *The link*

Bidirectional link between numbers and space: An investigation with Optokinetic Stimulation

5. Hartmann, Farkas, & Mast: *Self-motion perception influences number processing: Evidence from a parity task*
6. Yates, Vicario, Loetscher & Nicholls: *Prismatic lenses influence the magnitude of numbers selected in a random number generation task*
7. Hoffmann, Mussolin, Schiltz: *The interaction between number and space processing and math achievement in adults*
8. Commins, Carroll, Wharton, Fitzpatrick, Fleming: *140 characters in search of an audience: Linguistic and non-linguistic features of the construction of context in twitter utterances*
9. De Filippo, Cutini, Lisi & Zorzi: *Space coding for sensorimotor transformations can emerge through unsupervised learning* (MOVED FROM POSTER SESSION 3)

ORAL SESSION 6 **Number and quantity**

Chair: Martin Fischer

- Hoffmann, Goffaux, Schuller, Martin & Schiltz: *Behavioral, EEG and fMRI investigations of number-space interactions: When numbers act as attentional cues* **15:20-15:40**
- Gianelli, Ranzini, Marzocchi, Rettore Micheli & Borghi: *Influence of numerical magnitudes on the free choice of an object position* **15:40-16:00**
- Ragni & Sonntag: *Preferences and illusions in quantified spatial relational reasoning* **16:00-16:20**

- Gyorko & Labadi: *Relationship between numerical abilities and spatial cognition in preschool children* **16:20-16:40**
- Kontra, Lyons, Fischer & Beilock: *Physical physics: Embodiment of vector quantities in the classroom* **16:40-17:00**

between affective closeness and space perception

5. Gradinarova, Kanchev & Janyan: *Give me time to picture that: Effects of time and imageability on effector-specific motor activation in idiom processing*
6. Palmiero, Di Giacomo & Passafiume: *Can creativity modulate cognitive reserve in normal aging?*
7. Palmiero, Di Giacomo & Passafiume (MOVED TO ORAL SESSION 7)
8. Gertner, Arend & Henik: *Effects of non-symbolic numerical information suggest the existence of magnitude – space synesthesia*
9. Picazio, Oliveri, Koch, Caltagirone, & Petrosini: *Musical cerebellum: Its role in mental rotation* (DOCTORAL PRESENTATION)

ORAL SESSION 7 **Aesthetic experience**

Chair: Franco Delogu

- Linkovski, Akiva-Kabiri, Gertner & Henik: *Is it for real? Evaluating authenticity of musical pitch-space synesthesia*
- Kochman, Demoucron, Moelants & Leman: *Respiration as a indicator of embodied music cognition in collaborative vocal performance*
- Tirinelli, Thompson, Luck, Schmid, Toiviainen & Olivetti Belardinelli: *Effects of musical expertise, pattern complexity and manifested beat on movement kinematics during perception and reproduction of auditory rhythms*
- Ganczarek: *Empathy in aesthetic experience: From Einfühlung to simulation in perception of still works of visual art*
- Palmiero, Di Giacomo & Passafiume: *The embodiment of creativity* (MOVED FROM POSTER SESSION 8; van der Jagt, Craig, Anable, Brewer & Pearson: WITHDRAWN)

COFFEE BREAK

SYMPOSIUM 17 **Objects and action in the individual and social space: Affordances and embodied cognition**

Convenor: Anna Borghi

- Sinigaglia: *The power of action. From personal to interpersonal bodily space* **17:30-17:50**
- Daprati: *Sharing the reaching space: Effects on healthy individuals and psychiatric patients* **17:50-18:10**

- Binkofski: *Functional anatomical basis for stable and variable affordances* **18:10-18:30**
- Borghi: *The physical and social space of affordances* **18:30-18:50**

- Lindemann & Paulus: *Acquisition of action knowledge through verbal and social learning* **18:50-19:10**
- Ellis: *Objects and agents: Affordance in a material and social world* **19:10-19:30**

- Stefanucci, Creem-Regehr, Geuss, Gagnon & Thompson: *Real and virtual changes to the body affect the perception of affordances* **19:30-19:50**

ORAL SESSION 8 **Disability, rehabilitation & assistance**

Chair: Marcia Scherer

- Adya, Killeen, Scherer, Samant, & Morris: *Assistive/Rehabilitation technology, disability & service delivery models*
- Balconi, Sozzi, Ferrari, Pisani & Mariani: *Eye-movements and bisection behavior in spatial neglect syndrome. Representational biases induced by the segment length and spatial dislocation of the stimulus*
- Sozzi, Balconi, Arangio, Pisani & Mariani: *Top-down strategy in rehabilitation of spatial neglect: How about age effect?*
- Glize, Jacquin-Courtois, Lunven, Cotton, Chapeau, Klinger, Joseph & Rode: *Bottom-up effect of prism adaptation on hemineglect in virtual spatial domain*
- Smith & Buckley: *Spatial navigational impairments in hydrocephalus*
- Liapi, Linaraki & Voradaki: *Sensponsive architecture as a tool to stimulate the senses and alleviate the psychological disorders of an individual*
- Kantowitz: *Hands that think, eyes that feel, minds that see: Integrating visual art and academic learning for disadvantaged students*

Saturday, September 08

Aula III

SYMPOSIUM 18

Spatial cognition in robotics

Convenors: Antonio J. Bandera & Ricardo Vazquez-Martin

- Antunez, Palomino & Marfil: *Perceptual organization and artificial attention for visual landmarks detection* **8:30-8:50**
- Arkin: *The role of mental rotations in primate-inspired robot navigation* **8:50-9:10**
- Figueiredo, Haffele, Drews Jr & Botelho: *Spatial and perceptive mapping using semantically self-organizing maps applied to mobile robots* **9:10-9:30**
- Ferreira, Tsiourti & Dias: *Learning emergent behaviours for a hierarchical Bayesian framework for active robotic perception* **9:30-9:50**
- Gutiérrez, Manso, Drews Jr & Núñez: *The spatial change detection problem in robotics: A probabilistic approach based on mixture of Gaussians* **9:50-10:10**

COFFEE BREAK

SYMPOSIUM 18

Spatial cognition in robotics (continued)

- Manso, Bustos, Bachiller & Franco: *Indoor scene perception for object detection and manipulation* **10:40-11:00**
- Martínez Gómez, García-Varea, Rodríguez-Ruiz & Revuelta-Martínez: *On the impact of depth information for visual place classification* **11:00-11:20**
- Romero & Cazorla: *Topological visual mapping in robotics* **11:20-11:40**
- Vazquez-Martin & Bandera: *Unified framework for recognition, localization and mapping using wearable cameras* **11:40-12:00**

KEYNOTE LECTURE, Aula Magna, 12:15

Luciano Fadiga

The motor framework of peripersonal space

LUNCH BREAK

ORAL SESSION 11

Artificial systems and virtual reality

Chair: Martin Butz

- Riecke, Sigurdarson, & Milne: *Moving through virtual reality without moving?* **14:30-14:50**
- Moutinho: *Exploring the role of real-world size representation within interactive systems* **14:50-15:10**
- Quinton: *Emergence of space from sensorimotor invariants: Anticipatory network analysis in the context of the Tetris game* **15:10-15:30**
- Morlino, Gianelli, Borghi & Nolfi: *Category learning through action: A study with human and artificial agents* **15:30-15:50**
- Zhang & Zhang (WITHDRAWN) **15:50-16:10**

Aula IV

ORAL SESSION 9

Neuropsychology

Chair: Emiliano Macaluso

- Wegman, Tyborowska & Janzen: *Encoding and retrieval of object-related spatial cues during navigation: An fMRI study*
- Van Ekert, Wegman, Jansen, Takashima & Janzen: *Memory consolidation of landmarks: An fMRI study*
- Lobben, Schinazi & Pickett: *Decoding urban street patterns in the human brain*
- Cattani & Clibbens: *Categorical and coordinate spatial relations of object processing in deaf signing adults*
- Mason & Van Velzen: *The goal is not special: Electrophysiological evidence for the simultaneous selection of goal and effector location during action planning*

ORAL SESSION 10

Social and urban space

Chair: Mirilia Bonnes

- Luini, Scorzelli, Mastroberardino & Marucci: *Spatial cognition and crime: The study of mental models of spatial relations in crime analysis*
- Barakat: *Urban growth morphology analysis in response to the sonic character*
- Farzaneh: *The exploration of relational models within urban morphogenesis*
- Suitner & Giacomantonio (WITHDRAWN)

ORAL SESSION 12

Memory and knowledge

Chair: Antonino Raffone

- Catricalà & Guidi: *Hyperbole, abstract motion and spatial knowledge: Sequential vs. simultaneous scanning*
- Dunn, Baguley, Lansdale & Horsley: *Spatial memory exclusivity: Investigating the effect of semantics and distinctiveness on location memory integration*
- Frankenstein, Brüssow, Ruzzoli & Hölscher: *The language of landmarks: The role of background knowledge in indoor wayfinding*
- Lansdale, Humphries & Flynn: *When using spatial memories renders them less precise*