

1. Record Nr.	UNISA996466213403316
Titolo	Spatial Cognition VII [[electronic resource]] : International Conference, Spatial Cognition 2010, Mt. Hood/Portland, OR, USA, August 15-19, 2010, Proceedings / / edited by Christoph Hölscher, Thomas F. Shipley, Marta Olivetti Belardinelli, John A Bateman, Nora S Newcombe
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2010
ISBN	3-642-14749-6
Edizione	[1st ed. 2010.]
Descrizione fisica	1 online resource (XI, 347p. 108 illus.)
Collana	Lecture Notes in Artificial Intelligence ; ; 6222
Disciplina	006.3/32
Soggetti	Computer simulation Simulation and Modeling
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Talks -- Individual Differences in Spatial Language and Way-Finding: The Role of Cognition, Emotion and Motivation -- CogSketch: Sketch Understanding for Cognitive Science Research and for Education -- The Refraction of Space: A Radical Reversal of Direction -- Distance and Time -- Investigating the Role of Goals and Environmental Structure on Memory for Distance and Time in Virtual Environments -- The Spatial and Temporal Underpinnings of Social Distance -- Navigation -- The Role of Slope in Human Reorientation -- Influence of Geometry and Objects on Local Route Choices during Wayfinding -- Testing Landmark Identification Theories in Virtual Environments -- Men to the East and Women to the Right: Wayfinding with Verbal Route Instructions -- Science Education and Spatial Skill -- Do All Science Disciplines Rely on Spatial Abilities? Preliminary Evidence from Self-report Questionnaires -- Gestures in Geology: The Roles of Spatial Skills, Expertise, and Communicative Context -- Using Analogical Mapping to Assess the Affordances of Scale Models Used in Earth and Environmental Science Education -- Language -- Aligning Spatial Perspective in Route Descriptions -- The Role of Grammatical Aspect in the Dynamics of Spatial Descriptions -- Implicit Spatial Length Modulates Time Estimates, But Not Vice Versa -- Computational

Modelling -- Bio-inspired Architecture for Active Sensorimotor
Localization -- Color Binding in Visuo-Spatial Working Memory --
Reference Frames -- Human EEG Correlates of Spatial Navigation within
Egocentric and Allocentric Reference Frames -- Putting Egocentric and
Allocentric into Perspective -- Reference Frames Influence Spatial
Memory Development within and Across Sensory Modalities -- Do We
Need to Walk for Effective Virtual Reality Navigation? Physical Rotations
Alone May Suffice -- Visual Attention in Spatial Reasoning -- Eye
Movements Reflect Reasoning with Mental Images but Not with Mental
Models in Orientation Knowledge Tasks -- An Eye-Tracking Study of
Integrative Spatial Cognition over Diagrammatic Representations --
Maps and Assistance -- Enriching Spatial Knowledge through a
Multiattribute Locational System -- Interactive Assistance for Tour
Planning -- Verbally Annotated Tactile Maps -- Challenges and
Approaches -- Generating Adaptive Route Instructions Using
Hierarchical Reinforcement Learning -- Language, Neuroscience and
Education -- Can Mirror-Reading Reverse the Flow of Time?.

Sommario/riassunto

This is the seventh volume of a series of books on fundamental research in spatial cognition. As with past volumes, the research presented here spans a broad range of research traditions, for spatial cognition concerns not just the basic spatial behavior of biological and artificial agents, but also the reasoning processes that allow spatial planning across broad spatial and temporal scales. Spatial information is critical for coordinated action and thus agents interacting with objects and moving among objects must be able to perceive spatial relations, learn about these relations, and act on them, or store the information for later use, either by themselves or communicated to others. Research on this problem has included both psychology, which works to understand how humans and other mobile organisms solve these problems, and computer science, which considers the nature of the information available in the world and a formal consideration of how these problems might be solved. Research on human spatial cognition also involves the application of representations and processes that may have evolved to handle object and location information to reasoning about higher-order problems, such as displaying non-spatial information in diagrams. Thus, work in spatial cognition extends beyond psychology and computer science into many disciplines including geography and education. The Spatial Cognition conference offers one of the few forums for consideration of the issues spanning this broad academic range.
