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Altri autori (Persone)	Barker-PlummerDave CoxRichard SwobodaNik
Disciplina	006.6
Soggetti	Application software Artificial intelligence Computer programming Computer science - Mathematics Discrete mathematics User interfaces (Computer systems) Human-computer interaction Social sciences - Data processing Computer and Information Systems Applications Artificial Intelligence Programming Techniques Discrete Mathematics in Computer Science User Interfaces and Human Computer Interaction Computer Application in Social and Behavioral Sciences
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Keynote Presentations -- The Importance of Both Diagrammatic Conventions and Domain-Specific Knowledge for Diagram Literacy in Science: The Hierarchy as an Illustrative Case -- Learning by Producing Diagrams -- Tutorials -- Eye Fixations and Diagrammatic Reasoning --

Cross-Cultural User-Experience Design -- Diagram Comprehension by Humans and Machines -- Communicative Signals as the Key to Automated Understanding of Simple Bar Charts -- On Line Elaboration of a Mental Model During the Understanding of an Animation -- From Diagrams to Models by Analogical Transfer -- Notations: History, Design and Formalization -- The Mathematics of Boundaries: A Beginning -- Syntactic Variety in Boundary Logic -- Fixing Shin's Reading Algorithm for Peirce's Existential Graphs -- Canonical Correlation Analysis: Use of Composite Heliographs for Representing Multiple Patterns -- Modularity and Composition in Propositional Statecharts -- Objects and Spaces: The Visual Language of Graphics -- Defining Euler Diagrams: Simple or What? -- Topological Relations of Arrow Symbols in Complex Diagrams -- Extended Abstract of Euclid and His Twentieth Century Rivals: Diagrams in the Logic of Euclidean Geometry -- Flow Diagrams: Rise and Fall of the First Software Engineering Notation -- Reasoning by Intervals -- Generalizing Spiders -- Diagrams and Education -- Diagrams in Second or Foreign Language Learning??! -- Evaluation of ERST – An External Representation Selection Tutor -- Changing Perceptions of Animated Diagrams -- The Visual and Verbal as Modes to Express Understanding of the Human Body -- Interpreting Hierarchical Structure: Evidence from Cladograms in Biology -- Active Comparison as a Means of Promoting the Development of Abstract Conditional Knowledge and Appropriate Choice of Diagrams in Math Word Problem Solving -- Reasoning with Diagrams by Humans and Machines -- Synthesizing Visual and Action Routines Using Constraint Programming -- Deduction with Euler Circles: Diagrams That Hurt -- Diagrams as Physical Models -- Visual Creative Design with the Assistance of Curious Agents -- The Logic of Geometric Proof -- Exploring the Effect of Animation and Progressive Revealing on Diagrammatic Problem Solving -- Psychological Issues in Comprehension, Production and Communication -- Visual Focus in Computer-Assisted Diagrammatic Reasoning -- Perceiving Relationships: A Physiological Examination of the Perception of Scatterplots -- Using Research Diagrams for Member Validation in Qualitative Research -- Androcentric Preferences for Visuospatial Representations of Gender Differences -- Exploring the Notion of 'Clutter' in Euler Diagrams -- Using Channel Theory to Account for Graphical Meaning Generations -- Toward a Comprehensive Model of Graph Comprehension: Making the Case for Spatial Cognition -- Active Comparison as a Means of Promoting the Development of Abstract Conditional Knowledge and Appropriate Choice of Diagrams in Math Word Problem Solving -- Psychological Issues in Comprehension, Production and Communication.

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## Sommario/riassunto

Proceedings of the 4th International Conference on Theory and Application of Diagrams, Stanford, CA, USA in June 2006. 13 revised full papers, 9 revised short papers, and 12 extended abstracts are presented together with 2 keynote papers and 2 tutorial papers. The papers are organized in topical sections on diagram comprehension by humans and machines, notations: history, design and formalization, diagrams and education, reasoning with diagrams by humans and machines, and psychological issues in comprehension, production and communication.

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