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Soggetti	Artificial intelligence Computers Software engineering Computer programming Computer science—Mathematics User interfaces (Computer systems) Artificial Intelligence Theory of Computation Software Engineering/Programming and Operating Systems Programming Techniques Discrete Mathematics in Computer Science User Interfaces and Human Computer Interaction
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Invited Talks -- Invited Talk: Representations to Mediate Geospatial Collaborative Reasoning: A Cognitive-Semiotic Perspective -- Invited Talk: Jon Barwise: A Heterogeneous Appreciation -- Tutorial 1 - Formal Approaches to Diagrams -- Tutorial 1: Formal Approaches to Visual Language Specification and Understanding -- Tutorial 2 - Cognitive Approach to Diagrams -- Tutorial 2a: Cognitive History of Science: The Roles of Diagrammatic Representations in Discovery and Modeling Discovery -- Tutorial 2b: Cognitive (Production System) Modelling of

How an Expert Uses a Cartesian Graph -- Tutorial 2c: The Coordination of External Representations and Internal Mental Representations in Display-Based Cognitive Tasks -- Logic and Diagrams -- Positive Semantics of Projections in Venn-Euler Diagrams -- On the Completeness and Expressiveness of Spider Diagram Systems -- Non-standard Logics for Diagram Interpretation -- Reviving the Iconicity of Beta Graphs -- Constraint Matching for Diagram Design: Qualitative Visual Languages -- Picking Knots from Trees -- Theoretical Concerns about Diagrams -- Differentiating Diagrams: A New Approach -- Logical Systems and Formality -- Distinctions with Differences: Comparing Criteria for Distinguishing Diagrammatic from Sentential Systems -- Cognition and Diagrams -- How People Extract Information from Graphs: Evidence from a Sentence-Graph Verification Paradigm -- Restricted Focus Viewer: A Tool for Tracking Visual Attention -- Communicating Dynamic Behaviors: Are Interactive Multimedia Presentations Better than Static Mixed-Mode Presentations? -- Capacity Limits in Diagrammatic Reasoning -- Human Communication with Diagrams -- Recording the Future: Some Diagrammatic Aspects of Time Management -- Lines, Blobs, Crosses and Arrows: Diagrammatic Communication with Schematic Figures -- Animated Diagrams: An Investigation into the Cognitive Effects of Using Animation to Illustrate Dynamic Processes -- A Comparison of Graphics and Speech in a Task-Oriented Interaction -- Diagramming Aesthetics: Modernism and Architecture in the 21st Century -- Diagrammatic Reasoning/Proof Systems -- JVenn: A Visual Reasoning System with Diagrams and Sentences -- A Proposal for Automating Diagrammatic Reasoning in Continuous Domains -- Playing with Diagrams -- The Use of Intermediate Graphical Constructions in Problem Solving with Dynamic, Pixel-Level Diagrams -- Diagrams for Systems, Systems for Diagrams -- Treatment of Diagrams in Document Image Analysis -- Universal Arrow Foundations for Visual Modeling -- Diagrammatic Acquisition of Functional Knowledge for Product Configuration Systems with the Unified Modeling Language -- Evaluating the Intelligibility of Diagrammatic Languages Used in the Specification of Software -- Executing Diagram Sequences -- MetaBuilder: The Diagrammer's Diagrammer -- Diagrammatic Control of Diagrammatic Structure Generation -- Two-Dimensional Positioning as Visual Thinking -- Reordering the Reorderable Matrix as an Algorithmic Problem -- Posters -- Clouds: A Module for Automatic Learning of Concept Maps -- A Diagrammatic Notation for Interval Algebra -- Animation of Diagrams: An Aid to Learning? -- Diagrams as Components of Multimedia Discourse: A Semiotic Approach -- Formalising the Essence of Diagrammatic Syntax -- Using Grids in Maps -- Case Analysis in Euclidean Geometry: An Overview -- Bar Charts Recognition Using Hough Based Syntactic Segmentation -- Experimenting with Aesthetics-Based Graph Layout.

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## Sommario/riassunto

Diagrams 2000 is dedicated to the memory of Jon Barwise. Diagrams 2000 was the first event in a new interdisciplinary conference series on the Theory and Application of Diagrams. It was held at the University of Edinburgh, Scotland, September 1-3, 2000. Driven by the pervasiveness of diagrams in human communication and by the increasing availability of graphical environments in computerized work, the study of diagrammatic notations is emerging as a research field in its own right. This development has simultaneously taken place in several scientific disciplines, including, amongst others: cognitive science, artificial intelligence, and computer science. Consequently, a number of different workshop series on this topic have been successfully organized during the last few years: Thinking with

Diagrams, Theory of Visual Languages, Reasoning with Diagrammatic Representations, and Formalizing Reasoning with Visual and Diagrammatic Representations. Diagrams are simultaneously complex cognitive phenomena and sophisticated computational artifacts. So, to be successful and relevant the study of diagrams must as a whole be interdisciplinary in nature. Thus, the workshop series mentioned above decided to merge into Diagrams 2000, as the single - terdisciplinary conference for this exciting new field. It is intended that Diagrams 2000 should become the premier international conference series in this area and provide a forum with sufficient breadth of scope to encompass researchers from all academic areas who are studying the nature of diagrammatic representations and their use by humans and in machines.

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