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Soggetti	User interfaces (Computer systems) Human-computer interaction Artificial intelligence Image processing - Digital techniques Computer vision Software engineering Machine theory User Interfaces and Human Computer Interaction Artificial Intelligence Computer Imaging, Vision, Pattern Recognition and Graphics Software Engineering Formal Languages and Automata Theory
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Diagrams in Mathematics -- On "overspecification" in medieval mathematical diagrams -- Transductive Reconstruction of Hippocrates' Dynamical Geometrical Diagrams -- Counting mathematical diagrams with machine learning -- Modes of continuity in diagram\\ Intermediate Value Theorem -- Modes of diagrammatic reasoning in Euclid's Elements -- A Mentalist Look at Gaussian Clock Arithmetic -- A Diagram of Choice: The Curious Case of Wallis's Attempted Proof of the Parallel Postulate and the Axiom of Choice -- Diagram Design,

Principles, and Classification -- A sketch of a theory and modelling notation for elucidating the structure of representations -- Modality and Uncertainty in Data Visualizations: A Corpus Approach to the Use of Connecting Lines -- Channel-Theoretic Account of the Semantic Potentials of False Diagrams -- Dissecting representations -- Towards Data-Driven Multilinear Metro Maps -- Visualizing Sound, Hearing Diagrams: On the Creative Process of *Syrmos* by Iannis Xenakis -- String Diagrams for Assembly Planning -- Reasoning with Diagrams -- An Alternative Reformulation of the Transformation Rules in the Beta Part of Peirce's Existential Graphs -- Observational Advantages and Occurrence Referentiality -- The Diagram Puzzle -- The Blot -- Two Implications and Dual-Process Theories of Reasoning -- Euler and Venn Diagrams -- Well-matchedness in Euler and Linear Diagrams -- Intuitionistic Euler-Venn Diagrams -- Schopenhauer Diagrams for Conceptual Analysis -- Euler diagrams for defeasible reasoning -- Empirical Studies and Cognition -- Event unit analysis: A methodology for anticipating processing demands of complex animated diagrams -- Evaluating Visualizations of Sets and Networks that Use Euler Diagrams and Graphs -- Visual causality: investigating the performance of graph layouts for understanding causal processes -- Influence of Shape, Density, and Edge Crossings on the Perception of Graph Differences -- Map or Gantt? Which diagram helps viewers best inspacio-temporal data exploration tasks? -- On effects of changing multi-attribute table design to decision making: An eye tracking study -- Logic and Diagrams -- Using Multigraphs to Study the Interaction between Opposition, Implication and Duality Relations in Logical Squares -- Opposition relations between prophecies -- Compositional Diagrammatic First-Order Logic -- Free Rides in Logical Space diagrams versus Aristotelian diagrams -- Fregean Logical Graphs -- Calculus CL as a Formal System -- Truth Graph: A Novel Method for Minimizing Boolean Algebra Expressions by Using Graphs -- Posters -- Syllogisms with intermediate quantifiers solved in Marlo logic diagrams -- The Indemonstrables of Chrysippus of Soli in Marlo logical diagrams. Could propositional calculus be nothing but syllogisms? -- 'Tokenized' dynamic diagrams: An approach for improving mental model construction? -- Depicting negative information in photographs, videos, and comics: a preliminary analysis -- The Marlo diagram in the classroom -- Strength of Existential Graphs as a logical system -- The Sung Diagram: Revitalizing the Eisenhower Matrix -- Marlo's networks of expectations in the classroom: A tool for heterogeneous reasoning -- Experimenting with diagrams in mathematics -- Historio-graphy -- A Semiotic-Conceptual Analysis of Euler Diagrams and Concept Lattices -- On the shoulders of giants: Colourful argument trees for academic writing -- Beta Assertive Graphs -- Peirce's inclusion diagrams, with application to syllogisms -- The DNA Framework of Visualization -- Imagine a round square -- Visualizing Curricula -- Elucidating the Effects of Diagram Use Training for Math Word Problem Solving.

Sommario/riassunto

This book constitutes the refereed proceedings of the 11th International Conference on the Theory and Application of Diagrams, Diagrams 2020, held in Tallinn, Estonia, in August 2020.* The 20 full papers and 16 short papers presented together with 18 posters were carefully reviewed and selected from 82 submissions. The papers are organized in the following topical sections: diagrams in mathematics; diagram design, principles, and classification; reasoning with diagrams; Euler and Venn diagrams; empirical studies and cognition; logic and diagrams; and posters. *The conference was held virtually due to the COVID-19 pandemic. The chapters 'Modality and Uncertainty in Data Visualization: A Corpus Approach to the Use of Connecting Lines,' 'On

Effects of Changing Multi-Attribute Table Design on Decision Making: An Eye Tracking Study,' 'Truth Graph: A Novel Method for Minimizing Boolean Algebra Expressions by Using Graphs,' 'The DNA Framework of Visualization' and 'Visualizing Curricula' are available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.
