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	Disciplina	006.3
	Soggetti	Artificial intelligence Machine theory Computer science Software engineering Artificial Intelligence Formal Languages and Automata Theory Computer Science Logic and Foundations of Programming Software Engineering Intel·ligència artificial Informàtica Enginyeria de programari Llibres electrònics
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	Nota di contenuto	Invited Talks -- Non-well-founded Deduction for Induction and Coinduction -- Towards the Automatic Mathematician -- Logical Foundations -- Tableau-based decision procedure for non-Fregean logic of sentential identity -- Learning from Lukasiewicz and Meredith: Investigations into Proof Structures -- Efficient Local Reductions to Basic Modal Logic -- Isabelle's Metalogic: Formalization and Proof Checker -- Theory and Principles -- The ksmt calculus is a delta-complete decision procedure for non-linear constraints -- Universal Invariant Checking of Parametric Systems with Quantifier-Free SMT

Reasoning -- Politeness and Stable Infiniteness: Stronger Together -- Equational Theorem Proving Modulo -- Unifying Decidable Entailments in Separation Logic with Inductive Definitions -- Subformula Linking for Intuitionistic Logic with Application to Type Theory -- Efficient SAT-based Proof Search in Intuitionistic Propositional Logic -- Proof Search and Certificates for Evidential Transactions -- Non-Clausal Redundancy Properties -- Multi-Dimensional Interpretation Methods for Termination of Term Rewriting -- Finding Good Proofs for Description Logic Entailments Using Recursive Quality Measures -- Computing Optimal Repairs of Quantified ABoxes w.r.t. Static EL Tboxes -- Generalized Completeness for SOS Resolution and its Application to a New Notion of Relevance -- A Unifying Splitting Framework -- Integer Induction in Saturation -- Superposition with First-Class Booleans and Inprocessing Clausification -- Superposition for Full Higher-Order Logic -- Implementation and Application -- Making Higher-Order Superposition Work -- Dual Proof Generation for Quantified Boolean Formulas with a BDD-Based Solver -- Reliable Reconstruction of Fine-Grained Proofs in a Proof Assistant -- An Automated Approach to the Collatz Conjecture -- Verified Interactive Computation of Definite Integrals -- ATP and AI -- Confidences for Commonsense Reasoning -- Neural Precedence Recommender -- Improving ENIGMA-Style Clause Selection While Learning From History -- System Descriptions -- A Normative Supervisor for Reinforcement Learning Agents (System Description) -- Automatically Building Diagrams for Olympiad Geometry Problems (System Description) -- The Fusemate Logic Programming System (System Description) -- Twee: An Equational Theorem Prover (System Description) -- The Isabelle/Naproche Natural Language Proof Assistant (System Description) -- The Lean 4 Theorem Prover and Programming Language (System Description) -- Harpoon: Mechanizing Metatheory Interactively (System Description).

| Sommario/riassunto | This open access book constitutes the proceeding of the 28th International Conference on Automated Deduction, CADE 28, held virtually in July 2021. The 29 full papers and 7 system descriptions presented together with 2 invited papers were carefully reviewed and selected from 76 submissions. CADE is the major forum for the presentation of research in all aspects of automated deduction, including foundations, applications, implementations, and practical experience. The papers are organized in the following topics: Logical foundations; theory and principles; implementation and application; ATP and AI; and system descriptions. |