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Nota di contenuto	Modeling Motivation in MicroPsi 2 -- Genetic Programming on Program Traces as an Inference Engine for Probabilistic Languages -- Scene Based Reasoning -- Anchoring Knowledge in Interaction: Towards a harmonic subsymbolic/symbolic framework and architecture of computational cognition -- Safe Baby AGI -- Observation, Communication and Intelligence in Agent-Based Systems -- Reffective Variants of Solomono Induction and AIXI -- Are there Deep Reasons Underlying the Pathologies of Today's Deep Learning Algorithms? -- Speculative Scientific Inference via Synergetic Combination of Probabilistic Logic and Evolutionary Pattern Recognition -- Stochastic Tasks: Difficulty and Levin Search -- Instrumental Properties of Social

Testbeds -- Towards Human-Level Inductive Functional Programming -- Anytime Bounded Rationality -- Ultimate Intelligence Part I: Physical Completeness and Objectivity of Induction -- Towards Emotion in Sigma: From Appraisal to Attention -- Inferring human values for safe AGI design -- Two Attempts to Formalize Counter possible Reasoning in Deterministic Settings -- Bounded Cognitive Resources and Arbitrary Domains -- Using Localization and Factorization to Reduce the Complexity of Reinforcement Learning -- Towards Flexible Task Environments for Comprehensive Evaluation of Artificial Intelligent Systems & Automatic Learners -- Assumptions of Decision-Making Models in AGI -- Issues in Temporal and Causal Inference -- The Space of Possible Mind Designs.-A Definition of Happiness for Reinforcement Learning Agents -- Expression Graphs: Unifying Factor Graphs and Sum-Product Neworks -- Toward tractable universal induction through recursive program learning -- How can Cognitive Modeling Benefit from Ontologies? Evidence from the HCI Domain -- C-tests revisited: back and forth with complexity -- A New View on Grid Cells Beyond the Cognitive Map Hypothesis -- Programming languages and artificial general intelligence -- From Specialized Syntax to General Logic: The Case of Comparatives -- Decision-Making During Language Understanding by Intelligent Agents -- Plan Recovery in Reactive HTNs Using Symbolic Planning -- Optimization Framework with Minimum Description Length Principle for Probabilistic Programming -- Can Machines Learn Logics? -- Comparing Computer Models Solving Number Series Problems -- Emotional Concept Development -- The Cyber-Physical System Approach towards Artificial General Intelligence: The Problem of Verification -- Analysis of Types of Self-Improving Software -- On the Limits of Recursively Self-Improving AGI -- G•odel Agents in a Scalable Synchronous Agent Framework.

Sommario/riassunto

This book constitutes the refereed proceedings of the 8th International Conference on Artificial General Intelligence, AGI 2015, held in Berlin, Germany in July 2015. The 41 papers were carefully reviewed and selected from 72 submissions. The AGI conference series has played, and continues to play, a significant role in this resurgence of research on artificial intelligence in the deeper, original sense of the term of “artificial intelligence”. The conferences encourage interdisciplinary research based on different understandings of intelligence, and exploring different approaches. AGI research differs from the ordinary AI research by stressing on the versatility and wholeness of intelligence, and by carrying out the engineering practice according to an outline of a system comparable to the human mind in a certain sense.