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Nota di contenuto Keynote Talks -- Using Neural Imaging to Inform the Instruction of

Mathematics -- Distributed Human-Machine Systems: Progress and Prospects -- Large Scale Reasoning on the Semantic Web: What to Do When Success Is Becoming a Problem -- How Midazolam Can Help Us Understand Human Memory: 3 Illustrations and a Proposal for a New Methodology -- Research on Brain-Like Computer -- A Framework for Machine Learning with Ambiguous Objects -- Special Session on Information Processing Meets Brain Sciences -- Data Compression and Data Selection in Human Vision -- Do Brain Networks Correlate with Intelligence? -- How Were Intelligence and Language Created in Human Brain -- Affective Learning with an EEG Approach -- Some Web Intelligence Oriented Brain Informatics Studies -- Thinking and Perception-centric Investigations of Human Information Processing Systems -- Modelling the Reciprocal Interaction between Believing and Feeling from a Neurological Perspective -- Information Hypothesis: On Human Information Capability Study -- Correlated Size Variations Measured in Human Visual Cortex V1/V2/V3 with Functional MRI --Effects of Attention on Dynamic Emotional Expressions Processing --Simulating Human Heuristic Problem Solving: A Study by Combining ACT-R and fMRI Brain Image -- EEG/ERP Meets ACT-R: A Case Study for Investigating Human Computation Mechanism -- Evaluation of Probabilities and Brain Activity - An EEG-Study -- Human Factors

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## Sommario/riassunto

This book constitutes the refereed proceedings of the International Conference on Brain Informatics, BI 2009, held in Beijing, China, in October 2009. The 21 revised full-length papers presented together with the abstracts of 6 keynote lectures and 5 papers from a special session were carefully reviewed and selected for inclusion in the book. The papers are organized in topical sections on information processing meets brain sciences, thinking and perception-centric investigations of human information processing systems, information technologies for the management and use of brain data, as well as cognition-inspired applications.