## **Table of Contents**

Using Neural Imaging to Inform the Instruction of Mathematics John Anderson	1
Distributed Human-Machine Systems: Progress and Prospects Jeffrey M. Bradshaw	2
Large Scale Reasoning on the Semantic Web: What to Do When Success Is Becoming a Problem	3
How Midazolam Can Help Us Understand Human Memory: 3 Illustrations and a Proposal for a New Methodology	4
Research on Brain-Like Computer	5
A Framework for Machine Learning with Ambiguous Objects Zhi-Hua Zhou	6
Special Session on Information Processing Meets Brain Sciences	
Data Compression and Data Selection in Human Vision	7

Data Compression and Data Selection in Human Vision	7
Do Brain Networks Correlate with Intelligence?	8
How Were Intelligence and Language Created in Human Brain $Setsuo\ Ohsuga$	9
Affective Learning with an EEG Approach	11
Some Web Intelligence Oriented Brain Informatics Studies	12

Thinking and Perception-centric Investigations of Human Information Processing Systems	
Modelling the Reciprocal Interaction between Believing and Feeling	
from a Neurological Perspective	13
Zulfigar A. Memon and Jan Treur	



**Keynote Talks** 

Information Hypothesis: On Human Information Capability Study $Ji\check{r}i~Kraji\check{c}ek$	25
Correlated Size Variations Measured in Human Visual Cortex V1/V2/V3 with Functional MRI	36
Effects of Attention on Dynamic Emotional Expressions Processing  Liang Zhang, Brigitte Roeder, and Kan Zhang	45
Simulating Human Heuristic Problem Solving: A Study by Combining ACT-R and fMRI Brain Image	53
EEG/ERP Meets ACT-R: A Case Study for Investigating Human Computation Mechanism	63
Evaluation of Probabilities and Brain Activity - An EEG-Study  Ralf Morgenstern, Marcus Heldmann, Thomas Münte, and Bodo Vogt	74
Human Factors Affecting Decision in Virtual Operator Reasoning Lydie Edward, Domitile Lourdeaux, and Jean-Paul Barthès	84
The Effect of Information Forms and Floating Advertisements for Visual Search on Web Pages: An Eye-Tracking Study	96
Figural Effects in Syllogistic Reasoning with Evaluation Paradigm: An Eye-Movement Study	106
Structured Prior Knowledge and Granular Structures	115
Multisensory Interaction of Audiovisual Stimuli on the Central and Peripheral Spatial Locations: A Behavioral Study	127
A Functional Model of Limbic System of Brain	135
Information Technologies for the Management and Use of Brain Data	
Data Explosion, Data Nature and Dataology	147

Table of Content
teading What Machines "Think"
Using SVM to Predict High-Level Cognition from fMRI Data: A Case tudy of 4*4 Sudoku Solving
Oata-Brain Modeling for Systematic Brain Informatics  Jianhui Chen and Ning Zhong
Cognition-inspired Applications
Combine the Objective Features with the Subjective Feelings in Personal Multi-alternative Decision Making Modeling
Automatic and Semi-automatic Approaches for Selecting Prominent patial Filters of CSP in BCI Applications
Boosting Concept Discovery in Collective Intelligences
egmentation of Heart Image Sequences Based on Human Way of decognition
Author Index