

**ICCI'07 Advanced Program
(V.3.0)**

Monday, August 6, 2007	
8:30-9:00am, Registration	
9:00-9:15am, Welcome	
9:15-10:05am, Keynote 1 Language Understanding and Unified Cognitive Science Prof. Jerry A. Feldman, UC Berkeley, USA	
10:05-10:20am, Coffee Break	
10:20-12:00, Parallel Sessions	
A1 Cognitive informatics	B1 Image and Pattern Recognition
Formal Descriptions of a Set of Meta Cognitive Processes of the Brain <i>Yingxu Wang</i>	Image Decomposition and Reconstruction using Two-Dimensional Complex-Valued Gabor Wavelets <i>Reza Fazel-Rezai and Witold Kinsner</i>
An Approach to Representation Changes while Executing Problem Solver Intelligent Systems Antonio Hernando, Luis de Ledesma, and Luis M. Laita	Cognitive Informatics in Automatic Pattern Understanding <i>Lidia Ogiela, Ryszard Tadeusiewicz, Marek R. Ogiela</i>
Formal Linguistics and the Deductive Grammar <i>Yingxu Wang</i>	A Cognitive Data Visualization Method Based on Hyper Surface <i>Qing He, Xiurong Zhao, and Zhongzhi Shi</i>
Towards a Spatial Representation for the Meta Cognitive Process Layer of Cognitive Informatics <i>Tiansi Dong</i>	A Simple High Accuracy Approach for Face Recognition <i>Liang Chen and Naoyuki Tokuda</i>
The Visual Implications of Inspection Time <i>Tyler Garaas and Marc Pomplun</i>	A Real-Time Color-Independent Method for Multiple Faces Tracking <i>Reza Iraj, M. T. Manzuri-Shalmani, A. H. Jamalian, and A. R. Sefidpour</i>
12:00am -1:30pm, Lunch	
1:30-3:10pm, Parallel Sessions	
A2 Cognitive Informatics for Software Engineering	B2 Rough and Fuzzy Set Modeling (Special Session)
Software Systems as Complex Networks <i>Lian Wen, Diana Kirk, and Geoff Dromey</i>	Knowledge Reduction of Covering Approximation Space <i>Jun Hu, Guoyin Wang, and Ang Fu</i>
On Experiments for Measuring Cognitive Weights for Software Control Structures <i>Ralf Laue and Volker Gruhn</i>	The Paradigm of Granular Rough Computing: Foundations and Applications <i>Lech Polkowski</i>
Cognitive Program Complexity Measure <i>Sanjay Misra</i>	A Classification Approach of Granules Based on Variable Precision Rough Sets <i>Shen-Ming Gu, Wei-Zhi Wu, and Hong-Tao Chen</i>
A Methodology from Software Engineering Inspection which Supports Replicable Mental Models Research <i>Andrew Brooks and Louise Scott</i>	Examining the ϵ -Optimality Property of a Tunable FSSA <i>Amir H. Jamalian, R. Iraj, A. R. Sefidpour, and M. T. Manzuri-Shalmani</i>
An Object Oriented Complexity Metric Based on Cognitive Weights <i>Sanjay Misra</i>	

3:10-3:30pm, Coffee Break	
3:30-5:10pm, Parallel Sessions	
A3 Granular Computing (Special Session)	B3 Cognitive Philosophy and Psychology
A Logic Language for Granular Computing <i>Yiyu Yao and Bing Zhou</i>	A Formal Environment for Describing Negotiation Capabilities <i>Alberto de la Encina, M. Hidalgo-Herrero, and Natalia Lopez</i>
Granular Computing: Granular Classifiers and Missing Values <i>Lech Polkowski and Piotr Artiemjew</i>	A Cognitive Psychology Approach for Balancing Elicitation Goals <i>Nadina M. Carod and Alejandra Cechich</i>
Characteristics of Pearson Residuals in a Contingency Matrix <i>Shusaku Tsumoto and Shoji Hirano</i>	Multiple Heads Acting as One Make a Thinking Enterprise <i>Donald Steward</i>
Granular Computing Application to Web-based Learning Support System <i>Lisa Fan</i>	Identifying Application Key Knowledge through System Operations Modeling <i>Pedro P. Alarcón and Juan Garbajosa</i>
Evaluating Learning Algorithms to Construct Rule Evaluation Models Based on Objective Rule Evaluation Indices <i>Hidenao Abe, Shusaku Tsumoto, Miho Ohsaki, Takahira Yamaguchi</i>	
Tuesday, August 7, 2007	
9:00-9:50am, Keynote 2 Cognitive Informatics Foundations of Nature and Machine Intelligence Prof. Yingxu Wang, Univ. of Calgary, Canada	
9:50-10:10am, Coffee Break	
10:10-11:50, Parallel Sessions	
A4 Knowledge Representation and Manipulation	B4 Symbiotic Computing (Special Session)
Quantifying Knowledge Base Inconsistency via Fixpoint Semantics <i>Du Zhang</i>	A Concept of Symbiotic Computing and its Application to Telework <i>Kenji Sugawara, Shigeru Fujita, and Hideki Hara</i>
On Cognitive Informatics Foundations of Knowledge and Formal Knowledge Systems <i>Yingxu Wang</i>	Interactive Design Method of Agent System for Symbiotic Computing <i>Takahiro Uchiya, Takahide Maemura, Hideki Hara, and Tetsuo Kinoshita</i>
Does ROSA Provide a Good View of the Memorizing Process? <i>Maria L. Pelayo, Fernando L. Pelayo, Fernando Cuartero, Valentin Valero, Gregorio Diaz, and Elena Nieto</i>	Socialware for People with Disabilities <i>Fumio Hattori, Kazuhiro Kuwabara, Noriaki Kuwahara, Shinji Abe, and Kiyoshi Yasuda</i>
Formal Description of the Mechanisms and Cognitive Process of Memorization <i>Yingxu Wang</i>	Agent-Based Recognition of Relations among People using GPS Data <i>Shigeru Fujita, Kenji Sugawara, Susumu Konno, Yusuke Watanabe, Kenji Tomioka, and Takayoshi Ito</i>
A Knowledge Representation Tool Based on Concept Algebra <i>Yousheng Tian and Yingxu Wang</i>	Effective Knowledge Sharing Based on Symbiotic Computing and its Application to Networked Cooperative Works <i>Takuo Suganuma, Toshimitsu Miyamoto, Jun Makishi, Gen Kitagata, and Norio Shiratori</i>
12:00am -1:30pm, Lunch	

1:30-2:50pm, Parallel Sessions	
A5 New System Models	B5 Intelligent Systems
Direct Calculation of the Fractal Singularity Spectrum <i>Michael Potter and Witold Kinsner</i>	Underwater Surface Recovery and Segmentation <i>Michael Jenkin, Andrew Hogue, Andrew German, Sunbir Gill, Anna Topol, and Stephanie Wilson</i>
ACORNS – Towards Computational Modeling of Communication and Recognition Skills <i>Lou Boves, Louis ten Bosch, and Roger Moore</i>	Software Tool for Breast Cancer Brachytherapy Planning using VTK <i>Rachel Jiang, Lide Cao, R. Sankreacha, and J. Pignol</i>
A Novel Segmentation and Navigation Method for Polyps Detection using Mathematical Morphology and Active Contour Models <i>Rachel Y. Jiang, J. Meng, and N. Jaffer</i>	An Algorithm to Improve the Effectiveness of Apriori <i>Dongmei Sun, Shaohua Teng, Wei Zhang, Haibin Zhu</i>
CCTP, Graph Coloring Algorithms – Soft Computing Solutions <i>Anindya J. Pal, Samar S. Sarma, and Biman Ray</i>	Applying the knowledge Stored in Systems Models to Derive Validation Tools and Environments <i>Agustín Yague and Juan Garbajosa</i>
2:50-3:20pm, Coffee Break	
3:20-5:00pm, Parallel Sessions	
A6 Computational Intelligence (Special Session)	B6 Applications of Cognitive Informatics
Foundation of Notation and Classification of Nonconventional Static and Dynamic Neural Units <i>Ivo Bukovsky, Zeng-Guang Hou, Jiri Bila, and Madan M. Gupta</i>	Improving Object-Oriented Analysis with Roles <i>Haibin Zhu</i>
Applied Research in Fuzzy Neural Network Predictive Control <i>Yong-Wei Li, Wei Li, Guo-Qing Yu, Zhen-Yu Wang, and Peng Guo</i>	Using Verbal Protocols to Assess the Influence of Import-Coupling on the Comprehensibility of OCL Expressions <i>Luis Reynoso, Marcela Genero, and Piattini Mario</i>
Unified Model and Robust Neural-Network Control of Omnidirectional Mobile Manipulators <i>Xiangmin Tan, Dongbin Zhao, Jianqiang Yi, Zeng-Guang Hou, and Dong Xu</i>	A Novel Simulation Approach For Estimating Residential Power Demand Based on Multi-Agent Society <i>Fen Lin, Dapeng Zhang, Zhongzhi Shi, Minjie Xu, and Yuanbing Zhou</i>
Research on the Algorithm for K-Shortest Paths Problem based on A* in Complicated Network <i>Lichao Chen, Jia Liu, Yingjun Zhang, and Binhong Xie</i>	Programmer's Expertise during Test-Driven Software Development <i>Shaochun Xu, Zendi Cui, Dapeng Liu, and Xuhui Chen</i>
Mapping Dynamic Environment Using Gaussian Mixture Model <i>Hongming Wang, Zengguang Hou, and Min Tan</i>	SME: Learning Automata-Based Algorithm for Estimating the Mobility Model of Soccer Players <i>Amir H. Jamalian, A. R. Sefidpour, M. T. Manzuri-Shalmani, and R. Iraj</i>
6:30-8:30pm, Banquet	

Wednesday, August 8, 2007

9:00-9:50am, Keynote 3

Challenges in the Design of Adaptive, Intelligent, and Cognitive Systems

Prof. Witold Kinsner, Univ. of Manitoba, Canada

9:50-10:10am, Coffee Break

10:10-12:10am, Parallel Sessions

A7 Autonomic Machine Learning

B7 Image Retrieval and Signal Processing

The Theoretical Framework and Cognitive Process of Learning
Yingxu Wang

A Tool for Dynamic Knowledge Modeling
Robert Harrison and Christine W. Chan

Automatic Discovery of Subgoals in Reinforcement Learning using Unique-Direction Value
Chuan Shi, Rui Huang, and Zhongzhi Shi

Contour-Based Image Retrieval
Zhiyong Zhang, Zhiping Shi, Zhiwei Shi, and Zhongzhi Shi

Using k-means for Clustering in Complex Automotive Production Systems to Support a Q-Learning-System
Andre Doring, Wilhelm Dangelmaier, and Christoph Danne

A User Driven Ontology Guided Image Retrieval Model
Lisa Fan and Botang Li

Event-Based Knowledge Acquisition for Ontology Learning
Wen Zhou, Zongtian Liu, Ying Liu, and Yan Zhao

An Image Association Model of the Brodmann Areas
Douglas S. Greer

AutoLearner: An Autonomic Machine Learning System Based on Concept Algebra
Kai Hu and Yingxu Wang

An Improved Least-Laxity-First Scheduling Algorithm of Variable Time Slice for Periodic Tasks
Wei Zhang, Shaohua Teng, Zhaohui Zhu, Xiufen Fu, and Haibin Zhu

Single-Scale Measures for Randomness and Complexity
Witold Kinsner

12:10am -1:30pm, Lunch

3:10-3:40pm Plenary Session

Perspective on Future Development of Cognitive Informatics