ICCI’05 Advanced Program
August 8-10, 2005, Univ. of California, Irvine, USA

All Sessions will be in Room Library, Univ. Club, UCI

Monday, August 8, 2005

Reception and Registration
8:00 - 9:00am

Plenary Session
9:00 - 10:20am, Chair: J.P. Tsai

Welcome

Keynote I
James A. Anderson: Cognitive Computation: The Resatz Brain Project

Coffee break: 10:20 - 10:40am

Session 1 Cognitive Informatics
10:40am - 12:20pm, Chair: W. Kinsner

D. Zhang: Fixpoint Semantics for Rule Base Anomalies
Y. Wang: The Cognitive Processes of Abstraction and Formal Inferences
J. A. Anderson: A Brain-Like Computer for Cognitive Software Applications: the Resatz Brain Project
L. Flax: Cognitive Modeling Using a Logic-based Algebra
Z. Shi and S. Zhang: Case-based Introspective Learning
C. C. Liu, W. S. E. Chen, etc.: Topological-based Classification Using Artificial Gene Networks

Lunch
12:20 - 14:00pm, Univ. Club

Session 2 Information and Signal Theories
14:00 - 15:20pm, Chair: D. Zhang

W. Kinsner: A Unified Approach to Fractal Dimensions
P. Luo, Q. He, and Z. Shi: Theoretical Study on a New Information Entropy and its Use in Attribute Reduction
H. Song, J. Zuo and F. Zhang: A New Model for Generating Chaos
N. Gadhok and W. Kinsner: Robust Independent Component Analysis for Cognitive Informatics

Coffee break: 15:20 - 15:40pm

Session 3 Intelligent Systems
15:40 – 17:00pm, Chair: R.K. Moore

F. Rui, Y. Zhao, and W. Li: A Novel Fuzzy Neural Network: Vague Neural Network
M. Aziz and R. Macredie: Analyzing the Role of Perceived Self-Efficacy in Information Processing for Web-based Information Systems
P.H. Lee, J.P. Tsai, etc.: Study of the Protein-Protein Interaction Networks via Random Graph Approach
Q. Li, J. Shi and Z. Shi etc.: A Model of Attention-Guided Visual Sparse Coding
**Tuesday, August 9, 2005**

**Keynote II**
9:00 – 10:00am, Chair: W. Kinsner

Y. Wang: Psychological Experiments on the Cognitive Complexities of Fundamental Control Structures of Software Systems

Coffee break: 10:00 - 10:20am

**Session 4 Applications of Cognitive Informatics**
10:20am - 12:00pm, Chair: Z. Shi

F.L. Pelayo, F. Cuartero, etc.: How Does the Memory Work? By Timed-Arc Petri Nets
W. Zhang and G. Wang: Automatic Multi-Dimensional Association Rule Generation for Relational Data Sets
T. Osaragi and S. Onozuka: Map Element Extraction Model for Pedestrian Route Guidance Map
L. Teng, H. Li, etc.: Dimension Reduction of Microarray Data based on Local Tangent Space Alignment
G. Shi, K. Barker, R. Alhajj: Cognitive Information Fusion of Georeferenced Data for Tactical Applications
R. Moore: Toward A Unified Theory of Spoken Language Processing

**Lunch**
12:00 - 13:40pm, Univ. Club

**Session 5 Human factors in Engineering**
13:40 – 15:00pm, Chair: Y. Yao

Y. Wang: On Cognitive Properties of Human Factors in Engineering
M. Pomplun, E. Carbone, etc.: How to Disregard Irrelevant Stimulus Dimensions: Evidence from Comparative Visual Search
Y. Wang: On the Cognitive Processes of Human Perception

Coffee break: 15:00 - 15:20pm

**Session 6 Cognitive Learning**
15:20 - 17:00pm, Chair: F.L. Pelayo

M. Hidalgo-Herrero, I. Rodriguez, and F. Rubio: Testing Learning Strategies
O. M. Bonastre and M.J.M. Pina: Cognitive Learning for Distance Education: A Concept Maps Perspective
L. Fan: A Cognitive Approach of Web-based Learning Support Systems
F.L. Pelayo, M. Nunez and N. Lopez: Specifying the Memorization Process with STOPA

**Banquet**
18:30 - 20:30pm (Place TBD)
Wednesday, August 10, 2005

Keynote III
9:00 – 10:00am, Chair: L. Flax
W. Kinsner: Review of Recent Development in Cognitive Informatics

Coffee break: 10:00 – 10:20am

Session 7 Knowledge and Concept Modeling
10:20am - 12:00pm, Chair: P. Sheu
Y. Zhao and Y. Yao: Interactive Classification Using a Granule Network
R. Harrison, D. Obst and C.W. Chan: Design of an Ontology Management Framework
J. Zhao and G.Y. Wang: A Data-Driven Knowledge Acquisition Method based on System Uncertainty
A. Ouali, A. Ramdane-Cherif etc.: Delimiting Cut-off of Age at Onset in Schizophrenia Using Bayesian Network
Y. Chen and Y. Yao: Formal Concept Analysis Based on Hierarchical Class Analysis

Lunch
12:00 - 13:30pm, Univ. Club

Session 8 Intelligent Decision Making
13:30 – 14:50pm, Chair: G.T. Wang
Y. Wang: Mathematical Models and Properties of Games
A. Ngo-The and M.O. Saliu: Measuring Dependency Constraint Satisfaction in Software Release Planning using Dissimilarity of Fuzzy Graphs
Y. Wang: A Novel Decision Grid Theory for Dynamic Decision making
F.L. Greitzer: Toward the Development of Cognitive Task Difficulty Metrics to Support Intelligence Analysis Research

Coffee break: 14:50 - 15:10pm

Session 9 Cognitive Software Engineering
15:10 - 17:30pm, Chair: C.W. Chan
G.N. Aranda, A. Vizcaino, A. Cechich and M. Piattoni: A Cognitive-Based Approach to Improve Distributed Requirement Elicitation Processes
C.F. Ngolah and Y. Wang: Formal Specification of CORBA-Based Distributed Objects and Behaviors
S. Xu, V. Rajlich etc.: An Empirical Study of Programmer Learning during Incremental Software Development
M. Lai: Software Libraries of Intelligent Transportation System Based on GIS

Plenary
17:30 - 17:50pm, Chair: Y. Wang

Perspectives on future development
Welcome to ICCI 2006