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

Registration
8:00 - 9:00am

Plenary Session
9:00 - 10:20am, Chair: Yingxu Wang

Welcome

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

Coffee break: 10:20 - 10:40am

Session 1 Cognitive Informatics
10:40am - 12:20pm, Chair: Witold Kinsner
S1-1 Du Zhang: Fixpoint Semantics for Rule Base Anomalies
S1-2 Yingxu Wang: The Cognitive Processes of Abstraction and Formal Inferences
S1-3 James A. Anderson: A Brain-Like Computer for Cognitive Software Applications: the Ersatz Brain Project
S1-4 Lee Flax: Cognitive Modeling Using a Logic-Based Algebra
S1-5 Zhongzhi Shi and Sulan Zhang: Case-Based Introspective Learning
S1-6 Chun-Chi Liu, Wen-Shyen E. Chen, Pei-Chun Chang, and Jywe-Fei Fang: Topological-Based Classification Using Artificial Gene Networks

Lunch
12:20 - 2:00pm, Univ. Club

Session 2 Information and Signal Theories
2:00 - 3:20pm, Chair: Du Zhang
S2-1 Witold Kinsner: A Unified Approach to Fractal Dimensions
S2-2 Ping Luo, QingmHe, and Zhongzhi Shi: Theoretical Study on a New Information Entropy and its Use in Attribute Reduction
S2-3 Heng Song, Ji-zhang Zuo, and Feng-ming Zhang: A New Model for Generating Chaos
S2-4 Neil Gadhok and Witold Kinsner: Robust Independent Component Analysis for Cognitive Informatics

Coffee break: 3:20 - 3:40pm

Session 3 Intelligent Systems
3:40 – 5:00pm, Chair: Roger K. Moore
S3-1 Rui Fang, Yi-Biao Zhao, and Wei-Sheng Li: A Novel Fuzzy Neural Network: Vague Neural Network
S3-2 Maryam Aziz and Robert Macredie: Analyzing the Role of Perceived Self-Efficacy in Information Processing for Web-Based Information Systems
S3-3 Po-Han Lee, Jeffrey J.P. Tsai, Chien-Hung, Huang, Ka-Lok Ng, and Jywe-Fei Fang: Study of the Protein-Protein Interaction Networks via Random Graph Approach
S3-4 Qingyong Li, Jun Shi, and Zhongzhi Shi: A Model of Attention-Guided Visual Sparse Coding
Tuesday, August 9, 2005

Keynote II
9:00 – 10:00am, Chair: Witold Kinsner

Yingxu 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: Zhongzhi Shi

S4-1 Fernando L. Pelayo, Fernando Cuartero, Valentin Valero, Maria L. Pelayo, and Mercedes G. Merayo: How Does the Memory Work? By Timed-Arc Petri Nets
S4-2 Wei Zhang and George (Taehyung) Wang: Automatic Multi-Dimensional Association Rule Generation for Relational Data Sets
S4-3 Toshihiro Osaragi and Satoko Onozuka: Map Element Extraction Model for Pedestrian Route Guidance Map
S4-4 Li Teng, Hongyu Li, Xuping Fu, Wenbin Chen, and I-Fan Shen: Dimension Reduction of Microarray Data Based on Local Tangent Space Alignment
S4-5 George Shi, Ken Barker, and Reda Alhajj: Cognitive Information Fusion of Georeferenced Data for Tactical Applications
S4-6 Roger K. Moore: Toward A Unified Theory of Spoken Language Processing

Lunch
12:00 - 1:40pm, Univ. Club

Session 5 Human Factors in Engineering
1:40 – 3:00pm, Chair: Frank Greitzer

S5-1 Yingxu Wang: On Cognitive Properties of Human Factors in Engineering
S5-2 Marc Pomplun, Elena Carbone, Lorenz Sichelschmidt, Boris M. Velichkovsky, and Helge Ritter: How to Disregard Irrelevant Stimulus Dimensions: Evidence from Comparative Visual Search
S5-3 Yaoping Hu: On the Functional and Architectural Structures of Human Visuomotor Systems
S5-4 Yingxu Wang: On the Cognitive Processes of Human Perception

Coffee break: 3:00 - 3:20pm

Session 6 Cognitive Learning
3:20 - 5:00pm, Chair: Fernando L. Pelayo

S6-1 Mercedes Hidalgo-Herrero, Ismael Rodriguez and Fernando Rubio: Testing Learning Strategies
S6-3 Oscar M. Bonastre, Maria J.M. Pina: Cognitive Learning for Distance Education: A Concept Maps Perspective
S6-4 Lisa Fan: A Cognitive Approach of Web-Based Learning Support Systems
S6-5 Fernando L. Pelayo, Manuel Nunez, and Natalia Lopez: Specifying the Memorization Process with STOPA

Banquet
6:30 - 8:30pm (Univ. Club)
Wednesday, August 10, 2005

Keynote III
9:00 – 10:00am, Chair: Lee Flax
Witold 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: Phil Sheu
S7-1 Yan Zhao and Yiyu Yao: Interactive Classification Using a Granule Network
S7-2 Robert Harrison, Daniel Obst, and Christine W. Chan: Design of an Ontology Management Framework
S7-3 Jun Zhao and Guo-Yin Wang: A Data-Driven Knowledge Acquisition Method Based on System Uncertainty
S7-4 A. Ouali, A. Ramdane-Cherif, and M.O Krebs: Delimiting Cut-off of Age at Onset in Schizophrenia Using Bayesian Network
S7-5 Yaohua Chen and Yiyu Yao: Formal Concept Analysis Based on Hierarchical Class Analysis

Lunch
12:00 - 1:30pm, Univ. Club

Session 8 Intelligent Decision Making
1:30 – 2:50pm, Chair: George Wang
S8-1 Yingxu Wang: Mathematical Models and Properties of Games
S8-2 An Ngo-The and Moshood Omolade Saliu: Measuring Dependency Constraint Satisfaction in Software Release Planning using Dissimilarity of Fuzzy Graphs
S8-3 Y. Wang: A Novel Decision Grid Theory for Dynamic Decision Making
S8-4 Frank L. Greitzer: Toward the Development of Cognitive Task Difficulty Metrics to Support Intelligence Analysis Research

Coffee break: 2:50 - 3:10pm

Session 9 Cognitive Software Engineering
3:10 - 5:30pm, Chair: Du Zhang
S9-1 Gabriela N. Aranda, Aurora Vizcaíno, Alejandra Cechich, and Mario Piattini: A Cognitive-Based Approach to Improve Distributed Requirement Elicitation Processes
S9-2 Cyprian F. Ngolah and Yingxu Wang: Formal Specification of CORBA-Based Distributed Objects and Behaviors
S9-3 Shaochun Xu, Václav Rajlich, and Andrian Marcus: An Empirical Study of Programmer Learning during Incremental Software Development
S9-4 Mei Lai: Software Libraries of Intelligent Transportation System Based on GIS

Plenary
5:30 - 5:50pm, Chair: Yingxu Wang
Perspectives on future development
Welcome to ICCI 2006