

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 Jeremy J.W. Chen*: 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, Qingmei He, 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 Rodríguez and Fernando Rubio*: Testing Learning Strategies

S6-2 *Franck Barbier and Pierre Laforcade*: Concepts, Techniques and Tools for an Educational Modeling Language

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 Vizcaino, 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