



## Advanced Program

August 16-17, 2004, University of Victoria, Victoria, BC, Canada

**Sunday, August 15, 2004**

18:30 – 20:00 **Reception and Registration**, Haro Room, Cadboro Commons (map D3)

**Monday, August 16, 2004**

8:00 – 9:00 **Registration**, Room 116 Hickman Building / Centre for Innovative Teaching (map B3)

**All ICCF'04 Sessions will be held in Room 116 Hickman Building (Centre for Innovative Teaching)**

9:00 - 10:20 **Plenary Session** Chair: *D.M. Miller*

Opening Remarks

**Keynote Address:** *Language, Logic, and the Brain*, *R. Jennings*

10:20 - 10:40 Coffee

10:40 - 12:00 **Session 1 Cognitive Informatics** Chair: *C. Chan*

*W. Kinsner*: Is Entropy Suitable to Characterize Data and Signals for Cognitive Informatics?

*Y. Wang*: On the Cognitive Informatics Foundations of Software Engineering

*F. Rubio and I. Rodríguez*: *A Parallel Language for Cognitive Informatics*

*Y. Yao*: *Concept Formation and Learning: A Cognitive Informatics Perspective*

12:00 - 13:30 **Lunch**, Haro Room, Cadboro Commons

13:30 - 14:50 **Session 2 Formal Methods for Cognitive Informatics (I)** Chair: *W. Kinsner*

*X. Tan, Y. Wang, and C. Ngolah*: Specification of the RTPA Grammar and Its Recognition

*N. López, M. Núñez, and F. Pelayo*: STOPA: A STOchastic Process Algebra for the Formal Representation of Cognitive Systems

*V. Chiew and Y. Wang*: Formal Description of the Cognitive Process of Problem Solving

*O.Kuchar, J. Reyes-Spindola, and M. Benarock*: Cognitive Bioinformatics: Computational Cognitive Model for Dynamic Problem Solving

14:50 - 15:10 Coffee

15:10 – 16:50 **Session 3 Cognitive Informatics and Software Engineering** Chair: *Y. Wang*

*K. Lui and K. Chan*: *A Cognitive Model for Solo Programming and Pair Programming*

*G.-Y. Wang, J. Zhao, J.-J. An, and Y. Wu*: Theoretical Study on Attribute Reduction of Rough Set Theory: Comparison of Algebra and Information Views

*S. Misra and A. Misra*: Evaluating Cognitive Complexity Measure with Weyuker Properties

*Y. Liu, H. Liu, B. Zhang, and G. Wu*: Extraction of If-Then Rules from Trained Neural Network and Its Application to Earthquake Prediction

*A. Redouane*: Towards a New Method for the Development of Web-Based Applications

19:00 - 21:00 **Dinner**, University Club (map A3)

**Tuesday, August 17, 2004**

**All ICCI'04 Sessions will be held in Room 116 Hickman Building (Centre for Innovative Teaching)**

9:00 – 10:00 **Keynote Address** Chair: *W. Kinsner*

On Autonomous Computing and Cognitive Processes, *Y. Wang*

10:00 - 11:00 **Session 4 Formal Methods for Cognitive Informatics (II)** Chair: *W. Kinsner*

*L. Flax*: Algebraic Modeling of Some Cognitive Neuropsychology of Schizophrenia

*Y. Wang, D. Liu, and G. Ruhe*: Formal Description of the Cognitive Process of Decision Making

*M. Núñez, I. Rodríguez, and F. Rubio*: Applying Occam's Razor to FSMs

11:00 - 11:20 Coffee

11:20 - 12:40 **Session 5 Cognitive Informatics and Industrial Applications** Chair: *L. Flax*

*C. Chan*: Towards Ontology Construction for an Industrial Domain

*A. Ngo-The, G. Ruhe, and W. Shen*: Release Planning under Fuzzy Effort Constraints

*S. Xu and V. Rajlich*: Cognitive Process during Program Debugging

*E. Hui, A. Veawab, and C. Chan*: Uncertainty Modeling in Selection of Gas/Liquid Contactors Using Bayesian Networks

12:40 - 13:40 **Lunch** Haro Room, Cadboro Commons,

13:40 – 15:20 **Session 6 Cognitive Informatics and Neural Networks** Chair: *C. Chan*

*Z. Shi*: Neural Field Model for Perceptual Learning

*M. Motoki, Y. Tomiura, and N. Takahashi*: Problems of FGREP Module and Their Solution

*H. Nguyen and C. Chan*: A Comparison of Data Preprocessing Strategies for Neural Network Modeling of Oil Production Prediction

*Z.-G. Hou, M. Tan, M. Gupta, and P. Nikiforuk*: Real-Time Optimization and Computation for Interconnected Nonlinear Systems Using Neural Networks

*X. Liu*: Building Linux Based Neural Network Applications

15:20 - 15:40 Coffee

15:40 - 17:00 **Session 7 Cognitive Informatics for Agent Technologies** Chair: *D.M. Miller*

*A. Ramdane-Cherif, S. Benarif, and N. Levy*: Agent Technologies for Pervasive Computing and Communications

*N. Houari and B. Far*: Application of Intelligent Agent Technology for Knowledge Management Integration

*Z. Shi, H. Zhang, and Y. Cheng*: MAGE: An Agent-Oriented Programming Environment

*B. Far*: Modeling and Implementation of Software Agents Decision Making

17:00 - 17:15 **Plenary Session** Chair: *Y. Wang*

Closing Remarks

ICCI'05 Information