

# **Workshop Program: Building Computational Intelligence and Machine Learning Virtual Organizations**

**George Mason University, Fairfax, Virginia  
Room A, 3<sup>rd</sup> Floor, Johnson Center Building  
October 24, 2008**

9:00 – 9:10

*Opening remarks*, Jacek M. Zurada (Univ. Louisville)

## **Session I-Chair: Dr. Rammohan Ragade (Univ. of Louisville)**

9:10 – 9:30

*Cyber Advancing Research/Research Advancing Cyber*, Scott Midkiff, National Science Foundation

9:30 – 9:50

*Building Virtual Community in Computational Intelligence and Machine Learning*, Jacek M. Zurada (Univ. Louisville)

9:50 – 10:10

*Toward Multidisciplinary Collaboration in the CIML Virtual Community*, Jacek M. Zurada, Janusz Wojtusiak, Maciej A. Mazurowski, Devendra Mehta, Khalid Moidu, Steve Margolis (Univ. Louisville, George Mason Univ., Orlando Health, Orlando, Florida)

10:10 – 10:30

*Computational Intelligence Software for Pattern Recognition and Time Series Prediction*, Patricia Melin, Oscar Castillo, Olivia Mendoza (Tijuana Institute of Technology, UABC Univ. Tijuana, Mexico)

10:30 – 10:50 Coffee break

## **Session II-Chair: Dr. Jacek M. Zurada (Univ. of Louisville)**

10:50 – 11:10

*Virtual Communities-Large Scale Human-Computer Networks*, Robert Kozma, Marko Puljic (Univ. of Memphis, US Air Force Research Laboratory)

11:10 – 11:30

*Empirical Comparison of Learning Algorithms: Pitfalls and Challenges*, Vladimir Cherkassky (Univ. Minnesota)

11:30 – 11:50

*CI<sup>2</sup> – SBE: CyberInfrastructure (CI) and Computational Intelligence (CI) Involvement in Social, Behavioral and Economic (SBE) Sciences*, Fahmida Chowdhury (National Science Foundation)

11:50 – 12:50 Lunch break

## **Session III-Chairs: Drs. James Gentle, Janusz Wojtusiak (George Mason Univ.)**

12:50 – 1:10

*Collaborative Experimentation Using Agent-based Simulation*, Jan D. Gehrke (Univ. Bremen, Germany)

1:10 – 1:30

*Development of the Intelligent Sensor Network Anomaly Detection System: Problems and Solutions*, Leon Reznik and Carl Hoffman (Rochester Institute of Technology)

1:30 – 1:50

*Conservation of Information (COI). A Concept Paper on Virtual Organizations and Communities*, William F. Lawless, Donald A. Sofge (Paine College)

1:50– 2:10

*Computational Intelligence Software for Interval Type-2 Fuzzy Logic*, Oscar Castillo, Patricia Melin, Juan R. Castro (Tijuana Institute of Technology, Mexico)

2:10 – 2:30

*Workflow Considerations in the Emerging CIML-Virtual Organization*, Chris Boyle, Artur Abdullin, Maciej A. Mazurowski, Janusz Wojtusiak, Rammohan Ragade, Jacek M. Zurada (Univ. Louisville, George Mason Univ.)

2:30 – 3:20 Coffee break

**2:30-3:20 Session IV-Round-Table Discussion *CI-ML VO for Education and Interdisciplinary Cooperation*, Moderator: Dr Jacek M. Zurada (Univ. Louisville)**

**Session V-Chairs: Drs. Mo Jamshidi (Univ. Texas San Antonio), Robert Kozma (Univ. Memphis)**

3:20 – 3:40

*Application Testing of Novel Neural Network Structures*, Leon Reznik, Gregory Von Pless, and Tayeb Al Karim (Rochester Institute of Technology)

3:40 – 4:00

*A DEVS-JAVA-XML Simulation and Implementation of a System of Rovers for Threat Detection*, Mo Jamshidi (Univ. Texas San Antonio)

4:00 – 4:20

*Computational Challenges in Modeling, Control and Optimization in Electric Power and Energy Systems*, G K Venayagamoorthy (Missouri Univ. of Science and Technology)

4:20 – 4:40

*Demonstration and Application of Rule Discovery Methods Using iAQ*, Jaroslaw Pietrzykowski (George Mason Univ.)

4:40 – 5:00

*A Bayesian Machine Learning Method for Sensor Selection and Fusion with Application to On-Board Fault Diagnostics*, Niranjan Subramanyah, Yung C. Shin, Peter H. Meckl (Purdue Univ.)

5:00 – 5:20

*Knowledge Discovery in Data with Selected Java Open Source Software*, Carlos Rojas, Olfa Nasraoui, Nurcan Durak, Leyla Zuhadar, Sofiane Sellah, Zhiyong Zhang, Basheer Hawwash (Univ. Louisville)