

WELCOME MESSAGE FROM THE CHAIRPERSONS

The organizing committee welcomes you to the 2012 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications (IEEE CIMSA 2012), held in Tianjin, China, on July 2-4, 2012. This meeting, co-sponsored by the IEEE Computational Intelligence Society and the IEEE Instrumentation and Measurement Society, is the tenth of a successful series that extends its roots back to the 1996 IEEE Workshop on Emerging Technologies for Instrumentation and Measurement, as a profound evidence of the continuous and even increasing interest in this research and applications area.

The three-day conference program aims to provide a forum for the attendees to carry out presentations, information exchanges, extensive formal and informal discussions on theory, methodology and applications in the field of interest of the conference, as well as to foster networking, planning for future collaborations and new research projects that will further extend and advance the use of computational intelligence in the instrumentation and measurement field in an informal setting arranged to encourage broad discussion about theory, methodologies and results. We hope the conference will foster and discuss opportunities and challenges in using computational intelligence breakthroughs aiming to the advancement of instrument performance and measurement capabilities, and related applications. To promote interaction and discussion in the audience, sufficient time is allotted to presenters not only to introduce their achievements, but also to engage in extended discussions with the participants. Subjects of discussion include, but are not restricted to, critical evaluation of approaches and results, the rationale underlying particular methodologies, experimental and theoretical examinations, practical difficulties, insights, and extensions to other application areas.

The IEEE CIMSA 2012 conference is held in parallel with the 2012 IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems (IEEE VECIMS 2012). Due to their many common aspects and shared technologies, this parallel organization will foster vivid and rewarding interaction among the participants of the two events, and contribute to sharing advanced knowledge and producing stimulating experiences as well as potential research synergies.

We hope you will find IEEE CIMSA 2012 a challenging and productive experience. We trust that you will also enjoy the location, the culture and the food: Tianjin will be an exciting experience!

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Program Co-Chairs

Shifeng Yang, Tianjing University of Science and Technology, China
Serge Demidenko, RMIT Vietnam University,
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Pre-Conference Registration (July 1, 2012)

Time	Program	Venue
13:00-20:00	Registration	Lobby of Tianjin Huigao Garden Hotel
18:00-20:00	Welcome Reception	Restaurant of Tianjin Huigao Garden Hotel

Conference Day 1 (July 2, 2012)

Time	Program	Venue
08:00-12:00	Registration	Lobby of Tianjin Huigao Garden Hotel
08:30-10:00	Opening Session <ul style="list-style-type: none">● Welcome Speeches● Keynote Presentation 1	Huigao Grand Ball Room
10:00-10:30	Photo Taking and Tea Break	Outdoor Garden
10:30-12:00	<ul style="list-style-type: none">● Keynote Presentation 2● Keynote Presentation 3	Huigao Grand Ball Room
12:00-13:45	Lunch	Restaurant
14:00-16:00	Session A2	Conference Room 2 in Huigao Garden Hotel
16:00-16:20	Tea Break	
16:20-18:00	Session B2: Special Session 2	Conference Room 2 in Huigao Garden Hotel
18:00-20:00	Conference Banquet	Banquet Hall

Conference Day 2 (July 3, 2012)

Time	Program	Venue
08:30-10:10	Session C2	Conference Room 2 in Huigao Garden Hotel
10:10-10:30	Tea Break	
10:30-12:10	Session D2	Conference Room 2 in Huigao Garden Hotel
12:10-13:45	Lunch	Restaurant
14:00-16:00	Session E2	Conference Room 2 in Huigao Garden Hotel
16:00-16:20	Tea Break	
16:20-18:00	Joint sessions with VECIMS 2012	Conference Room 1&2 in Huigao Garden Hotel
18:00-19:30	Dinner	Banquet Hall

Conference Day 3 (July 4, 2012)

Time	Program	Venue
08:30-11:50	Joint sessions with VECIMS 2012	Conference Room 1&2 in Huigao Garden Hotel
11:50	Close ceremony with student competition award announcement	

Sunday, July 1

1:00 PM - 8:00 PM **Registration**

6:00 PM - 8:00 PM **Welcome Reception**

Monday, July 2

8:00 AM - 12:00 AM **Registration**

8:30 AM - 10:00 AM **Opening Session
Welcome Speeches
Keynote Presentation 1**

10:00 AM - 10:30 AM **Photo Taking and Tea Break**

10:30 AM - 12:00 PM **Keynote Presentation 2 and Keynote Presentation 3**

12:00 PM - 1:45 PM **Lunch**

2:00 PM - 4:00 PM

Session A2

Room: Conference Room 2 in Huigao Grand Ball Room

2:00 PM The Partitioned Kernel Machine Algorithm for Online Learning
Jason P Rhineland (Carleton University, Canada)
Xiaoping Peter Liu (Carleton University, Canada)

2:20 PM Structural Damage Detection Using Artificial Neural Networks and Wavelet Transform
Arthur Shi (California Polytechnic State University, USA)
Xiao-Hua Yu (California Polytechnic State University, USA)

2:40 PM Holonic Granularity in Intelligent Data Analysis: a Case Study Implementation
Vincenzo Di Lecce (Politecnico di Bari, Italy)
Marco Calabrese (Polytechnic of Bari, Italy)
Claudio Martines (Politecnico di Bari, Italy)

3:00 PM Probabilistic Differential Evolution for Optimal design of LQR weighting matrices
Hend Liouane (Ecole Nationale d'Ingénieurs de Monastir (ENIM), Tunisia)
Ibtissem Chiha (Ecole Nationale d'Ingénieurs de Monastir (ENIM), Tunisia)
Ali Douik (Ecole Nationale d'Ingénieurs de Monastir (ENIM), Tunisia)
Hassani Messaoud (Ecole Nationale d'Ingénieurs de Monastir (ENIM), Tunisia)

3:20 PM A Genetic Simulated Annealing Hybrid Algorithm for Relay Nodes Deployment Optimization in Industrial Wireless Sensor Networks
Peng Sun (Tsinghua University, P.R. China)
Jianshe Ma (Tsinghua University, P.R. China)
Kai Ni (Tsinghua University, P.R. China)

3:40 PM **Weight Estimation From Frame Sequences Using Computational Intelligence Techniques**
Ruggero Donida Labati (Università degli Studi di Milano, Italy)
Angelo Genovese (Università degli Studi di Milano, Italy)
Vincenzo Piuri (University of Milan, Italy)
Fabio Scotti (Universita' degli Studi di Milano, Italy)

4:00 PM - 4:20 PM **Tea Break**

4:20 PM - 6:00 PM
Session B2
Room: Conference Room 2 in Huigao Grand Ball Room

4:20 PM **Modelling of survival curves in food microbiology using adaptive fuzzy inference neural networks**
Vassilis Kodogiannis (University of Westminster, United Kingdom)
Ilias Petrounias (University of Manchester, United Kingdom)

4:40 PM **Facial Emotional Expressions Recognition Based on Active Shape Model and Radial Basis Function Network**
Endang Setyati (Institut Teknologi Sepuluh Nopember & Sekolah Tinggi Teknik Surabaya, Indonesia)
Yoyon Suprpto (Sepuluh Nopember Institute of Technology, Indonesia)
Mauridhi Purnomo (Institut of Technology Sepuluh Nopember, Indonesia)

5:00 PM **Analysis of How the Choice of Machine Learning Algorithms Affects The Prediction of A Clinical Outcome Prior to Minimally Invasive Treatments for Benign Pro Static Hyperplasia BPH**
Dalila B. Megherbi (University of Massachusetts, Lowell, USA)
Brian Soper (University of Massachusetts, Lowell, USA)

5:20 PM **Modified Corticomuscular Coherence Measurement and Computation Under Static Force Output of Human-Machine Interaction**
Yue Ren (Tianjin University, P.R. China)
Dong Ming (Tianjin University, P.R. China)
Nannan Li (Tianjin University, P.R. China)
Xin Wang (Tianjin University, P.R. China)
Rui Xu (Tianjin University, P.R. China)
Hongzhi Qi (Tianjin University, P.R. China)
Baikun Wan (Tianjin University, P.R. China)
Weijie Wang (University of Dundee, United Kingdom)
Rami Abboud (University of Dundee, United Kingdom)

5:40 PM **A Novel Probabilistic Fuzzy Set for Uncertainties-based Integration Inference**
Wen-Jing Huang (School of Mechanical and Electrical Engineering, Central South University, P.R. China)
Geng Zhang (School of Mechanical and Electrical Engineering, Central South University, P.R. China)
Han-Xiong Li (City university of Hong Kong, Hong Kong)

6:00 PM - 8:00 PM **Conference Banquet**

Tuesday, July 3

8:30 AM - 10:10 AM

Session C2

Room: Conference Room 2 in Huigao Grand Ball Room

- 8:30 AM** **An Interconnected Dynamical System Composed of Dynamics-based Reinforcement Learning Agents in a Distributed Environment: A Case Study**
Manuel Madera (CMINDS Research Center, University of Massachusetts Lowell, USA)
Dalila B. Megherbi (University of Massachusetts, Lowell, USA)
- 8:50 AM** **Human Gait Recognition based on Hybrid-Dimensional Features from Infrared Motion Images**
Lu Wang (Tianjin University, P.R. China)
Lixin Zhang (Tianjin University, P.R. China)
Yixing Yang (Tianjin University, P.R. China)
Hongzhi Qi (Tianjin University, P.R. China)
Baikun Wan (Tianjin University, P.R. China)
Dong Ming (Tianjin University, P.R. China)
Wei jie Wang (University of Dundee, United Kingdom)
Rami Abboud (University of Dundee, United Kingdom)
- 9:10 AM** **Combining Concepts of Inertia Weights and Constriction Factors in Particle Swarm Optimization**
Chuen-Yau Chen (National University of Kaohsiung, Taiwan)
Cheng-Hsueh Chuang (National University of Kaohsiung, Taiwan)
Meng-Cian Wu (National University of Kaohsiung, Taiwan)
- 9:30 AM** **Application of Wavelet Transform and Principal Component Analysis in Mineral Oil's 3D Fluorescence Spectra Compression**
Guangjun Tian (Yanshan University, P.R. China)
Yang Zichen (Yanshan University, P.R. China)
Lei Dong (Yanshan University, P.R. China)
- 9:50 AM** **Improving the Optimization Performance of NSGA-II Algorithm by Experiment Design Methods**
Shidong Qiao (National University of Defense Technology, P.R. China)
Xiang Dai (National University of Defense Technology, P.R. China)
Zhong Liu (National University of Defense Technology, P.R. China)
Jincai Huang (National University of Defense Technology, P.R. China)
Guangying Zhu (National University of Defense Technology, P.R. China)

10:10 AM - 10:30 AM

Tea Break

2:00 PM - 4:00 PM

Session E2

Room: Conference Room 1 in Huigao Grand Ball Room

2:00 PM Development and Testing of a LBP-SVM Based Teeth Visibility Recognizer

Qing Tian (McGill University, Canada)

Guangjun Tian (Yanshan University, P.R. China)

2:20 PM Traffic-Signs Recognition System Based on Multi-Features

Wei Wang (Nankai University, P.R. China)

Chia-Hung Wei (Ching Yun University, P.R. China)

Le Zhang (Nankai University, P.R. China)

Xuan Wang (Nankai University, P.R. China)

2:40 PM Multiple COA Coordination Based on Plan Merging

Li Lin (National University of Defense Technology, P.R. China)

Meng Qian (National University of Defense Technology, P.R. China)

Zhong Liu (National University of Defense Technology, P.R. China)

Cheng Zhu (National University of Defense Technology, P.R. China)

3:00 PM Multi-output LS-SVR Machine in Extended Feature Space

Wei Zhang (University of Tongji, P.R. China)

Xianhui Liu (University of Tongji, P.R. China)

Yi Ding (Maanshan Iron&Steel Co., Ltd., P.R. China)

Deming Shi (Maanshan Iron&Steel Co., Ltd., P.R. China)

4:00 PM - 4:20 PM Tea Break

4:20 PM - 6:00 PM Joint sessions with VECIMS 2012

6:00 PM - 7:30 PM Dinner

Wednesday, July 4

8:30 AM - 11:50 AM Joint sessions with VECIMS 2012

11:50 AM Close ceremony with student competition award announcement