



IEEE CIVEMSA 2013



2013 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications

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Instrumentation and Measurement Society*

*Organized by the IEEE CIS ISATC – Task Force on Intelligent Measurement Systems and
the IEEE IMS TC-22 on Intelligent Measurement Systems*

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To increase the quality of life and better support the economical development, we often appreciate adaptable solutions, simple interfaces, and virtual views for enhanced operation. The wide and increasing needs of adaptable and flexible solutions for many industrial, environmental, engineering, educational, entertainment, and biomedical applications point out the importance of using design methodologies and implementation technologies with high ability of adaptation and evolution. Computational intelligence is one of the most relevant answers to such needs. Virtual environments and human-computer interfaces are essential to effectively understand the operating environment and support interactive applications. On the other hand, accuracy and uncertainty issues as well as suited data acquisition systems must be carefully considered in these applications since the quality of the solution greatly relies on them. Up to now, analysis has been performed mainly to understand the underlying technologies and methodologies, but without any specific focus on the mandatory need of a quantitative assessment and a metrological analysis. Measurement science and technologies are vital to ensure the correct and effective use of computational intelligence and virtual technologies in real environments. IEEE CIVEMSA inherits and merge the decennial success of IEEE CIMSA and IEEE VECIMS; this new conference series will continue the exciting interdisciplinary experience of the previous editions by filling this gap in knowledge and practice.

Papers are solicited on all aspects of computational intelligence, human-computer interaction technologies, and virtual environments for measurement systems and the related applications, from the points of view of both theory and practice. This includes, but is not limited to, the following topics with specific emphasis on the computational intelligence and measurement aspects: intelligent measurement systems; human-computer interaction; augmented and virtual reality; accuracy and precision of neural/fuzzy components and virtual environments; perception, neurodynamics, neurophysiology, psychophysics; multimodal sensing; multimodal (visual, haptic, audio, etc) virtual environments; sensors and displays; calibration; multi-sensor data fusion and intelligent sensor fusion; intelligent monitoring and control systems; neural and fuzzy technologies for identification, prediction, and control of complex dynamic systems; evolutionary monitoring and control; evolutionary techniques for optimization and logistics; neural and fuzzy signal/image processing for industrial, environmental and domestic applications; neural and fuzzy signal/image processing for entertainment and educational applications; image understanding and recognition; object modeling; object and system model validation; virtual reality languages; computational intelligence for robotics and vision; computational intelligence for medical and bioengineering applications; computational intelligence for entertainment and educational applications; collaborative distributed virtual environments; model-based telecommunications and telecontrol; hybrid systems; fuzzy and neural components for embedded systems; hardware implementation of neural and fuzzy systems for measurements; neural, fuzzy and genetic/evolutionary algorithms for system optimization and calibration; neural and fuzzy techniques for system diagnosis; reliability of fuzzy and neural components; fault tolerance and testing in fuzzy and neural components; neural and fuzzy techniques for quality measurement; standards.

SUBMIT DRAFT PAPERS BY 8 APRIL 2013

Details for the submission and all information concerning the symposium can be found at the symposium web site at <http://civemsa2013.ieee-ims.org/>. Acceptance/rejection will be emailed by 30 April 2013. The final manuscript is due by 31 May 2013. Submission implies willingness to register at the conference, pay the registration fee and present the paper in person. Papers will be included in the proceedings only if at least one author will register and pay the registration fee by 31 May 2013 (member and non-member fees only are acceptable to this purpose) - no exceptions. Papers included in the proceedings will also be included in the IEEE Xplore digital library only if the paper will be presented in person at the conference by one of the authors. If an author covers more than one paper with her/his registration to guarantee inclusion in the proceedings, she/he must pay a 50 US\$ surcharge for each paper in excess of one.

Web Site

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