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IEEE Instrumentation and Measurement Society*

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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.

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 FULL PAPERS BY 15 January 2015

Details for the submission and all information concerning the symposium can be found at the symposium web site at <http://2015.civemsa.ieee-ims.org/>. Acceptance/rejection will be emailed by 15 February 2015. The final manuscript is due by 15 March 2015. 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 1 April 2015 (member and non-member fees only are acceptable to this purpose) - no exceptions. Papers included in the proceedings will also be submitted for inclusion 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 USD surcharge for each paper in excess of one.