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Cyber Systems Enabling Knowledge Integration:
The Smart Response to Emerging Societal Challenges

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Preliminary Call for Papers

The 2013 IEEE SMC will be held in Manchester, in the heart of England. This city offers a unique combination of both historical and modern aspects of British culture. The conference venue is the Midland Hotel where the founding of the Rolls-Royce Company occurred on May 4, 1904. The hotel is located in downtown Manchester, near the railway station and business district. The 2013 IEEE SMC provides an international forum for both researchers and practitioners to report their latest innovations, summarize state-of-the-art in the field as well as exchange ideas, results, and visions in all fields of systems engineering, cybernetics, and human-machine systems. Organized according to those three principal SMC areas, the conference calls for papers on the technical topics listed below. Contributions ranging from theoretical results to practical or industrial applications are strongly encouraged. The conference theme is:

Cyber Systems Enabling Knowledge Integration: The Smart Response to Emerging Societal Challenges

Dynamic scientific and technological progress in all areas of human activities enables everyone to access almost limitless amounts of data as well as to interact in many different ways with the surroundings and with each other. The more that knowledge is engaged, the smarter the interaction processes, and the more efficient the solutions are. For this purpose, we need sound principles for the design of complex systems and methodologies for application of huge volumes of knowledge of these systems, based on cybernetic principles. We seek optimal ways to couple the complex technical systems with humans efficiently to respond to the vast societal challenges of today and tomorrow. The SMC community has accumulated considerable expertise with complex systems in all areas of Systems Science and Engineering, Cybernetics, and Human-Machine Systems. The latest results are expected to be presented at the conference.

Systems Science & Engineering:

Cloud Computing Systems
Complex Service-Oriented Systems
Conflict Resolution
Cooperative Systems and Control
Cyber-Physical Systems
Decision Support Systems
Discrete Event Systems and Petri Nets
Distributed Intelligent Systems
Enterprise Information Systems
Grey Systems
Homeland Security
Industrial Applications
Infrastructure Systems and Services
Intelligent Green Production Systems
Intelligent Learning in Control Systems
Intelligent Power and Energy Systems
Intelligent Transportation Systems
Medical Mechatronics
Robotic and Autonomous Systems
Self-Healing Systems
Service Systems and Organization
System Modeling and Control
Systems Biology
Technology Assessment/Innovation

Cybernetics:

Agent-Based Systems
Artificial Intelligence
Bioinformatics
Brain and Cognitive Engineering
Computational Life Science
Data and Information Fusion
Evolutionary Algorithms
and Computing
Granular Computing
Information Security
Intelligent Internet Systems
Intelligent Vehicle Systems
Internet of Things
Knowledge Acquisition
Knowledge-Based Systems
Machine Learning
Machine Perception
Medical Informatics
Natural Language Processing
Neural Networks
Pattern Recognition
Semantic Web
Soft Computing

Human-Machine Systems:

Adjustable Autonomy
Assistive Technology
Brain-Machine Interface Systems
Cognitive Computing
Cooperative Work-in-Design
Emotion Engineering
Haptics and Teleoperation
Human Centered Design
Human Centered Transportation
Human-Computer Interaction
Human-Machine System Design
Human-Robot Interaction
Information Systems for Design
Interactive Digital Media
Prosthetic & Orthotic Technology
Social Robotics
Systems Safety and Security
Virtual Reality Systems
Virtual Prototyping and Training
Web Intelligence and Interactions

Important Dates:

February 15, 2013

Deadline for submission of proposals for special sessions

March 15, 2013

Acceptance/Rejection notification of proposals for special sessions

March 31, 2013

Deadline for submission of full-length papers for regular and special sessions

April 30, 2013

Deadline for submission of proposals for tutorial sessions

June 30, 2013

Acceptance/Rejection notification for regular papers & special session papers

July 31, 2013

Early registration

July 31, 2013

Deadline for final camera-ready papers and tutorial material submission

October 13–16, 2013

Conference dates

Call for Special Sessions

Proposals to organize Special Sessions are strongly encouraged. Special Sessions must be related to the conference theme or especially hot topics within the conference scope. All submitted papers undergo the same review process as the regular papers, and submission to proposed sessions is not a guarantee of acceptance.

Call for Contributed Papers

Prospective authors are invited to submit their full-length papers electronically through the conference website. Each paper should be concise with sufficient detail and references to allow critical review. Papers will be reviewed by at least two referees for technical merit and content. Accepted papers will appear in the conference proceedings on the Xplore only if one of the authors is registered for the conference and presents the paper at the conference.

