



**INTERNATIONAL**

## INVITED SESSION SUMMARY

**Title of Session:**

**Knowledge Management and Smart Systems – IS31**

**Name, Title and Affiliation of Chair:**

**Dr. Cesar Sanin**

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**Details of Session (including aim and scope):**

Knowledge management and Smart Systems are continually evolving towards more advanced and sophisticated forms of developing human intelligence and decision-making models. They require more and more advanced knowledge representation, management, and discovery tools and techniques to be implemented within their core layers. This poses new challenges on the issue of developing innovative methodologies in the context of several research topics ranging from knowledge representation to knowledge integration, from knowledge management to knowledge processing, from knowledge discovery to knowledge delivery, and from knowledge evolution to knowledge distribution.

The objective of this invited session is to explore recent research progress in the smart systems methodologies and algorithms applied in real-world engineering problems. Papers from all Engineering fields are welcome, provided that they have significant level of intelligent systems content. This special session, therefore, aims at bringing together researchers, scientists, engineers, professionals, and academics working in various fields in order to consolidate the existing and propose new techniques. Papers describing original work concerning the algorithm, tool design, implementation, and real-world application are welcome.

**Extended versions of selected papers will be considered for publication in the International Journal of Cybernetics and Systems.**

**Relevant topics include but not limited to:**

Knowledge-Based Systems, Expert Systems, Cognitive Systems, Neural Networks, Artificial Immune Systems, Fuzzy Techniques and Systems, Genetic Algorithms and Evolutionary Computing, Hybrid Intelligent Systems, Intelligent Agents and Multi-Agent Systems, Self-organizing and complex systems, Knowledge Discovery and Data Mining, Data Analysis and Pattern Recognition, Machine Learning, Bayesian Networks, Knowledge Representation and Management, Computational neuroscience, Planning, Spatial and Temporal Reasoning, Knowledge Acquisition, Augmented Intelligence, Semantic-Based Systems.

Industrial Control, Monitoring and Planning, Intelligent Web-based Systems, Fault Diagnosis, Robotics, Image Processing, Machine and Computer Vision, Medical and Diagnostic Systems, Financial and Stock Market Monitoring and Prediction, Speech Processing and Synthesis, Natural Language Processing, Environmental Monitoring, Power Electronics and Drives, High Voltage Systems, Engine Control and Vehicle Applications, Signal and Time Series Processing, Wavelets.

Pervasive Computing, Intelligent Web Personalization, Ubiquitous Computing, Context-aware and Affective (Emotional) Computing, Mobile Computing and Systems, Business Intelligence Systems, Human-centered Computing, Intelligent User Interfaces, Cognitive Interfaces, User profiling, Evolvable Hardware, DNA Computing, Immunocomputing, Artificial Life, Bioinformatics using Intelligent and Machine Learning Techniques, Micro array Data Analysis, Intelligent Tutoring Systems, Artificial Intelligence and Information Agents on the Internet, E-commerce/E-business and E-learning, Semantic Web, Intelligent Web Mining and Applications, Virtual Reality and Multi-Media Intelligent Information Systems, Blind Source Separation.

**Proposed Dates:**

Call for Papers: December 15<sup>th</sup>, 2019

Abstract or Intention to participate to be received by: January 15<sup>th</sup>, 2020

Abstract Accepted by: February 7<sup>th</sup>, 2020

**Paper to be received by: May 8<sup>th</sup>, 2020**

Camera ready to be received by: May 29<sup>th</sup>, 2020

When submitting remember to choose Session **IS31**

**Invited Sessions Authors Registration Deadline**

Early / Authors Registration Deadline: 29 May 2020

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):**

**KERT – Knowledge Engineering Research Team, Australia**  
**Knowledge Engineering Team, Aligarh Muslim University, India**  
**Information Systems, Chengdu University of Information Technology, China**  
**Grupo de Inteligencia Computacional, University of the Basque Country, Spain**  
**Knowledge Management Team, Gdansk University of Technology, Poland**  
**Mechanical Engineering, Sharda University, India**  
**Visión Artificial y Fotónica, ITM, Colombia**  
**Information technology, University of Oviedo**

**Website URL of Call for Papers (if any):**

**Email and Contact Details:**

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