

KMO 2015: The Tenth International Conference on Knowledge Management in Organizations

Theme: Knowledge Management and Internet of Things

The conference is preceded by one day of free tutorials for participants who wish to learn state of the art of research relating to the topics of KMO and LTEC. The tutorials will be held on 24th August, 2015. The conference itself commences on the 25th August, 2015.

Internet of Things (IoT) involves using sensors and actuators to track and manage machinery and other physical assets across a network. It is rapidly gaining momentum, bringing millions of devices and objects into the connected world and enabling whole new ways of managing assets and operations. IoT also has the potential to transform manufacturing, building infrastructure, providing health care and managing supply chains by monitoring and optimizing activities and assets at a very granular level. The explosion of Internet of Things applications provides many opportunities for businesses to improve performance and create new service offerings. The unparalleled connectivity among devices creates new conveniences for users and consumers

The proliferation of networked sensors through the Internet of Things is creating more data. The large amounts of data collected create new business opportunities for enterprises including OEMs, service providers, and software publishers, for the monetization of IoT.

To match growth in data requires advanced analytics. There are many emerging challenges for Creating the Internet of Things. These include the integration and management of heterogeneous data, the integration and transfer of enriched data, the effective use of knowledge-based decision systems, retrieval and sharing of knowledge automatically from huge volumes of data, ensuring security and protecting privacy.

The data created from the Internet of Things is only beneficial to organisations when they can be turned into useful knowledge. When data is turned into knowledge, the enterprise is better positioned to respond and innovate in all phases of its operation to gain competitive advantages and even build entirely new business models.

This growing capability of firms to derive meaning using data from IoT means that knowledge management systems can provide the platform for companies to improve their most valuable asset. Knowledge management systems should form a crucial part of IoT investment. Knowledge Management has the ability to integrate and leverage information from multiple perspectives. IoT is uniquely positioned to take advantage of KM processes and procedures. These processes and procedures enable IoT applications to provide a rich structure to enable decisions to be made on a multitude and variety of ways. Organizations do not make decisions based on one factor; the total picture is what

should drive decisions. KM enables organizations to take the total picture IoT provides, and along with leveraging tools that provide processing speed to break up the data into subsets for analysis.

Developing a superior capacity to take advantage of IoT will enhance competitive advantage through knowledge management that will lead to improve services. Knowledge management systems should form a crucial part of IoT investment because it has the ability to process the type of knowledge that data from IoT can transform and exploit. Turning data from IoT into useful knowledge for real-time IoT analytics poses many new challenges to the development of IoT applications.

The Tenth KMO conference intends to bring together researchers and developers from industry and the academic world to discuss and research into how best use knowledge management to design of IoT applications. It aims to shed light on recent advances in IoT applications and how knowledge management through data from IoT that can improve services and competitiveness. KMO 2015 provides the ideal opportunity to present your research and experiences in the fields of computer science, information technology, Knowledge management, big data and IoT applications. We welcome researchers from both industry and academia to submit original results of their works. Broad understanding of possible approaches to solving knowledge issues in the Internet of Things would be encouraged.

Topics in KMO include, but are not limited to:

- Formal verification and model-checking for Internet of Things applications
- Knowledge representation models in the Internet of Things
- Business information processing and business models in the Internet of Things
- Management information systems of the Internet of Things
- Knowledge retrieving and sharing mechanisms in the Internet of Things
- Integration of heterogeneous information for the Internet of Things
- Reasoning algorithms for the knowledge systems in the Internet of Things
- Knowledge representation models in the Internet of Things
- Governance, Ethics and Trust in IoT and Big Data in KM
- Software engineering in the Internet of Things
- Service oriented computing in the Internet of Things
- Mobile tracking services in the Internet of Things
- Context Awareness in the Internet of Things
- Enterprise knowledge management in the Internet of Things
- Service oriented computing in the Internet of Things
- Privacy protection and security issues of the Internet of Things
- Intelligent applications of the Internet of Things
- Technologies of data management and integration in the Internet of Things
- Data Mining in the Internet of Things
- Interoperability including Semantic interoperability in the Internet of Things
- Business models for the Internet of Things
- Development methodologies for IoT-based applications
- IoT for health
- Organizational semiotics

- Testing, debugging, validation, and QoS modelling of Internet of Things applications
- Big Data Computing for Knowledge Management
- Mobile Data Communications
- Business models on Big Data applications
- Supply chain of big data and data products
- Real-time data mining in mobile internet
- Web 2.0 and Data Mining
- Data and Knowledge Interoperability and Exchange
- Semantic web data management
- Large-scale network data analysis
- Large data stream processing on cloud
- Large incremental datasets on cloud
- Open source real-time computing system for data mining
- Security and privacy in Big Data
- Knowledge Acquisition and Discovery (AI, Data Mining, Text and Web Mining)
- Knowledge Organization (Meta Data, Taxonomies and Ontology)
- Theoretical development of Big Data
- Volume, velocity and variety of Big Data on cloud
- Cloud computing, peer-to-peer, parallel and distributed databases
- Big data and innovation
- Data and Knowledge Modeling
- Use Cases and Applications in Knowledge and Big Data analytics
- Data mining theory, methods, and applications
- Data warehousing and business intelligence
- Big Data theory
- Big data analytics
- Big Data applications
- Big Data processing tools
- Big Data visualization
- Big Data management
- Big data and smart city
- KM and Data Security
- Case studies of big data mining applications for providing online customer support
- Big data for knowledge management
- Capture of big data for knowledge management
- Big data and knowledge extraction
- New algorithmic approaches to Big Data
- Big data and knowledge sharing
- Privacy Preserving Big Data Collection / Analytics
- Big data on cloud
- Big Data Computing for Knowledge Management
- KM in the Cloud
- Privacy preserving on cloud
- Social networks analysis
- Algorithms for developing user profiles
- Knowledge Management and supply chains
- Benefits and Challenges in Adopting KM in the Public Sector
- KM in Education

- The role of KM in Tourism
- KM and Sustainable Competitive Advantage
- Social Networks Analysis
- KM, HR and Organizational Culture
- Social Networks Extraction and Construction
- KM and Organizational Structures
- Knowledge Management and Knowledge Networks
- Value Creation through Knowledge
- Transferring Critical Knowledge to Maintain Competitiveness
- Best practices and communities of practice
- Intellectual capital
- Business Process Management
- Requirements Engineering
- Competitive and Business Intelligence
- Social Media and Social Network Technologies
- Social media analytics
- Business forecasting
- Knowledge management in innovative applications, such as healthcare information and network
- security intelligence
- Knowledge Creation
- Organizational Memory
- Big Data sharing Knowledge Analytics Framework and Architecture
- Customer Knowledge in Innovation
- Customer Knowledge Management
- Managing Knowledge for Global and Collaborative Innovations
- Co-production of Knowledge
- Knowledge Management for Social Change and Innovation
- The Impacts of Knowledge Management in the Organization
- E-government
- Intelligent and Multi-agent Control Systems
- Innovative business models
- Innovation and Knowledge
- Innovation Management in the Public Sector Through KM
- Re-thinking Knowledge Management
- Innovative Processes and Models
- Innovation in Education and Training
- Practical examples of services innovation
- Mobile Data Communications
- KM Implementation Challenges and Opportunities
- Knowledge Assets
- Knowledge Measurement and Evaluation
- Knowledge Sharing
- Dynamic Knowledge Integration and Visualization
- Knowledge Creation through Crowdsourcing
- Social computing and knowledge management
- Service Science
- Management and Business Intelligence
- Information security and knowledge protection

- Web Services, Grid Services and Service-Oriented Computing
- Knowledge Representation
- Knowledge Evaluation
- KM Tools and Techniques
- Knowledge Quality Estimation and Uncertainty Handling
- The Role of Semantic Web in Software and Service Development
- Intelligent information systems
- Modeling of service, industrial, and environmental processes
- Predictive analytics
- Semantic and Entity-Based Information Retrieval
- Machine Learning for IR

Submission of full papers, short and position papers presenting novel ideas of knowledge management, big data, cloud computing, innovations and IoT are welcomed. Papers should contain original contributions not published or submitted elsewhere, and references to related state-of-the-art work.

Tutorial

In addition to the conference, there will be pre conference tutorials relating to the state of the art in the topics of the conference. Invitation for submission to the tutorial can be found in <http://kmo2015.um.si/call.html>.

Instructions for Authors

Papers reporting original and unpublished research results pertaining to the above topics are solicited. Full paper and all submissions deadline is 6th February, 2015. These papers will follow an academic review process. All papers are blind reviewed. Publication of the proceedings is planned in [Springer Lecture Notes in Business Information Processing](#) (final approval pending).

IMPORTANT: Please do not include the author(s) information in the FIRST submission of the paper, in order for double-blind review to be carried out.

Review Process

KMO 2015 welcomes the submission of papers with preference to the topics listed in the call for papers. All submitted papers will undergo a thorough review process; each paper will be refereed by at least three experts in the field, based on relevance, originality, significance, quality and clarity.

Submitting Papers

Paper manuscripts must be in English prepared in accordance with the [Springer instructions for authors](#). Full papers must be minimum 13 pages and maximum 16 pages in length, short papers must be minimum 10 pages and maximum 12 pages in length including figures and references. All proposed papers must be submitted in electronic form (WORD or PDF format) using the [Paper Submission Page](#). Those writing in LaTeX, upload PDF format for first submission and all LaTeX files in camera ready papers.

Publication

Accepted papers will be included in the KMO 2015 Proceedings. At least one of the authors will be required to register and attend the symposium to present the paper in order to include the paper in the conference proceedings. Publication of the proceedings is planned in [Springer Lecture Notes in Business Information Processing](#) (final approval pending). The attachment must be in Word format.

Special Issue

Authors of selected papers will be invited to extend and revise their papers to be submitted to a special issue of [International Journal of Web Engineering and Technology \(IJWET\)](#) published by Inderscience.

Important Dates

Submission of paper	28 th February, 2015 (extended)
Submission of tutorial	31 st January, 2015 (extended)
Author notification	1 st March, 2015
Early Registration	10 th April, 2015
Camera ready	15 th April, 2015
Conference date	24 th - 28 th August, 2015

Conference Chair

Professor Lorna Uden - Staffordshire University, UK

Program Chairs

Professor Marjan Heričko - University of Maribor, Slovenia

Professor I Hsien - National University of Kaohsiung, Taiwan

Local Chair

Saša Kuhar - University of Maribor, Slovenia

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- Dr. Paul Wu Horng Jyh - SIM University, Singapore
- Dr. Reinhard Bernsteiner - Management Center Innsbruck, Austria
- Dr. Remy Magnier-Watanabe - University of Tsukuba, Tokyo, Japan
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