INTERNATIONAL

INVITED SESSION SUMMARY

Title of Session:
Intelligent Digital Services and Architecture at KES 2022, Verona, Italy
7-9 September 2022

Session Chairs:
Alfred Zimmermann, Reutlingen University, Germany
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Call for Papers: http://kes2022.kesinternational.org/cms/userfiles/is0X.pdf
Submission Page: http://kes2022is.prosemanager.com/submitpaper.asp
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We are delighted to invite contributions to the Invited Session – Intelligent Digital Architectures. Our aim is to provide a platform for researchers and practitioners to discuss both technological and business aspects of intelligent digital architecture in the context of processes, services, products, platforms and business models. We also investigate how intelligent digital architectures support new ways of value co-creation.

Contemporary advances in the field of artificial intelligence have led to a rapidly growing number of intelligent systems that can operate entirely independently of human intervention or enables interactions of unprecedented complexity with humans. Data plays a central role in intelligent digital architecture and allows to automate decisions impacting all stakeholders. Using artificial intelligence techniques enable autonomous decisions hitherto reserved to human beings.

Intelligent systems augment processes by creating automated interfaces to human beings and replacing human-decision making by a machine-based one. Intelligent digital architectures support the request, configuration and fulfillment of services. Digitalization promotes the creation of intelligent systems and services with an intelligent digital architecture. Products based on intelligent digital architectures become aware of their environment, act upon it, are able to interact with human beings and can change their functionality during their lifetime. Based on intelligent digital architecture products and services have local autonomuous and dynamically extensible capabilities by accessing external services. Platforms become feasible by maching supply and demand of services, resources and products. Intelligent Digital Architectures also enable and enhance business models by integrating resources and leveraging decision making in unprecedented ways. Public discourse on ‘autonomous’ algorithms which work on ‘passively’ collected data contributes to this view.

The session – Intelligent Digital Architectures – covers fundamental and practical aspects to support the digital transformation. This disruptive change interacts with all information processes and systems, which are important business enablers for the digital transformation since years. Intelligent digital architectures enable the intense interaction with customers and products. The customer is closely integrated with

business processes and interacts like a co-worker by using implicit touch points, which are provided by mobility and wearable systems and the Internet of Things. In this way customer experience is fostered with disruptive transformation and continuous improvement.

Topics

- Digitalization of Products, Services, Processes, Systems, and Enterprises
- Intelligent Platforms and Ecosystems
- Intelligent Assistent Systems
- Dynamic Capabilities and Digital Enterprise Models
- Digital Strategy, Governance, and Management
- Digital Enterprise Architectures
- Security in Digital Architectures
- Architectural Patterns for Digitalization and Intelligent Analytics
- Customer Experience and Interaction Design
- Self-optimizing and Resilient Adaptive Systems
- Adaptive Software Architectures
- Runtime Monitoring of Operation Data
- Digital Platforms and Ecosystems
- Cognitive Models for Decision Support
- Artificial Intelligence Problem Solving for Digitalization
- Intelligent Systems and Services
- Deep Leraning and Machine Learning
- Semanic Support, Knowledge Representation and Inference Technologies
- Rationality and Explanation Technologies
- User Roles and Human-centred Problem Solving and Learning
- Digital Visualization, Interaction, and Augmented Reality
- Multi-perspective Architectural Viewpoints, Methods, and Environments
- Intelligent Digital Applications: Digitized Cars, Smart Finance, Smart City, Smart Home, Smart Medicine, Smart Energy, Industry 4.0, Society 5.0, 3-D Printing and Production Environments, Robots, etc.

Programme Committee / Main Contributing Researchers / Research Centres

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