



# International

*Innovation in Knowledge Based and Intelligent  
Engineering Systems*



## INVITED SESSION SUMMARY

### Title of Session:

Interdisciplinary Approaches in Data Science and Digital Transformation Practice (IADSDTP 2019)

### Name of Chair:

Prof. Ralf-Christian Härting, University of Aalen, Germany  
Prof. Ivan Luković, University of Novi Sad, Serbia

### Details of Session:

One of the hot issues in many organization systems is how to transform large amounts of daily collected operational data into the useful knowledge from the perspective of declared company goals and expected business values. The main concerns of this invited session are Data Science (DS) and Digital Transformation (DT) paradigms, as a set of theories, methodologies, processes, architectures, and technologies that transform raw data into meaningful and useful information, knowledge, and value. Various interdisciplinary oriented DS and DT approaches may provide organizations the ability to use their data to improve quality of business, increase financial efficiency and operational effectiveness, conduct innovative research and satisfy regulatory requirements. Applications of appropriate DS and DS implementation methodologies together with outcomes related to collaborative and interdisciplinary approaches are inevitable when applying DT approaches to large and complex organization systems. For many years, such interdisciplinary approaches were used in analyzing big data gathered from not only business sectors, but also public, non-profit, and government sectors.

The main goal of the session is to attract researchers from all over the world who will present their contributions, interdisciplinary approaches or case studies in the area of DS and DT. The focus in Data Science may be set to various aspects, such as data warehousing, reporting, online analytical processing, data analytics, data mining, process mining, text mining, predictive analytics and prescriptive analytics, as well as various aspects of machine learning, big data and time series analysis. We express an interest in gathering scientists and practitioners interested in applying DS and DT approaches in public and government sectors, such as healthcare, education, or security services. However, experts from all sectors are welcomed.

Submissions are expected from, but not limited to the following topics:

- Data Science and Digital Transformation – Theoretical and practical aspects
- Data Science and Digital Transformation Applications and Industry Experience
- Digitization and impacts for Digital Transformation
- Business Intelligence, Digitization and data driven business models
- Business Analytics and the new role of IT in enterprises
- Impacts of Business Analytics for the performance of profit or non-profit organisations
- Data Warehousing, Data Mining, Online Analytical Processing, and Reporting Capabilities
- Statistical analysis and characterization, predictive analytics and prescriptive analytics
- Process Mining, Pattern Mining, and Swarm Intelligence
- Data quality assessment and improvement: preprocessing, cleaning, and missing data
- Semi-structured or unstructured data in Business Intelligence systems
- Information integration for data and text mining
- Dynamic Pricing: potentials and DT Approaches
- Cloud-computing models and scalability in DT systems

- Mobile BI, Smart Data, Smart Services, and Smart Products
- Data privacy and security issues in Data Science and DT systems
- Digital Marketing, new web services, semantic web and data analytics
- Data Science and Analytics for Healthcare and other Public Sectors
- Educational Data Mining
- Social network data analysis
- Web survey methods in Business Intelligence and Data Science
- Organizational and human factors, skills, and qualifications for DS and DT Approaches
- Teaching DS and DT approaches in academic and industrial environments
- Smart Data, Smart Products, Smart Service World
- Artificial Intelligence, Machine Learning, Deep Learning – Theoretical and practical aspects

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

Aalen University, Faculty of Business Sciences  
University of Novi Sad, Faculty of Technical Sciences

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

<http://idt-19.kesinternational.org/>

**Email & Contact Details:**

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