



## INVITED SESSION SUMMARY

**Title of Session:**

Digital Economy 2017

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

Dr. Yun-Heh (Jessica) Chen-Burger, The Heriot-Watt University, Edinburgh, UK  
Dr. Arkadiusz Kawa, Poznan University of Economics and Business, Poland

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

This is an Era for a Digital Economy. The Web is rapidly developing towards an environment that is physically distributed; control decentralised and run by self-motivated software systems. This provides a unique and exciting opportunity that could potentially revolutionise entirely the conventional ways of doing business.

In parallel, the Internet has attracted a critical mass of subscriptions, from both businesses and individuals, where the Internet is used for information exchange, facilitating collaboration and cooperation, and carrying out e-Commerce and e-Business activities. Virtual organisations and automated e-commerce operations are a reality today. However, true autonomous trading systems that have full decision-making power rather than limited pre-determined operations are not available yet.

What are the relevant business and technological obstacles in achieving this? What are the make and break factors? What are the business theories and practice that are promising that may be realised through technologies? What are the innovative business models that are game changers?

What types of business intelligences are needed in autonomous business systems? What types of system architecture are suitable for facilitating and encouraging autonomous business systems? Can e-Commerce and supply chains be fully automated? Are trust and security issues an obstacle for automated systems? What are the existing technologies that one can draw on to overcome these obstacles? Can semantics-based technologies capture and enrich the relevant business knowledge thus enhance the decision making power and capabilities of such autonomous systems? Are (logical) reasoning mechanisms helpful? If so, what are their strengths and weakness? What types of system architectures are suitable, e.g. from a complete peer to peer architecture to a tightly (controlled) controlled systems, for creating ideal electronic environment for a virtual e-commerce market? What are their strengths and weakness?

In addition, the underlying computational platforms where business applications may be developed upon and run from, e.g. peer-to-peer, cloud and high-performance computing environments, do they play a role? The increasingly popular non-conventional column-based databases and business intelligence techniques that are commonly used to process and analyse big data, do they play a role in the digital economy? If so, how they may influence and shape today's and tomorrow's businesses?

**Topics**

This special session welcome reports on computational, business and social issues related to the above topics. It will focus on recent research and application results.

A list of interested topics for this session, but not limited to, is provided below:

- Vision on novel advances of automated intelligent business agents
- Innovative business theories and practice
- Innovative business models
- Survey of business practice on innovative IT deployment
- Technologies and applications on Business Intelligence
- Modeling and simulation of business processes
- Novel business models and automations in the Digital Economy

- Social impact and interactions in Digital Economy
- Service Oriented Architecture for business processes
- e-Supply Chains
- e-Logistics
- e-Commerce
- Supply Chain Configuration
- Agile Supply Chains
- Supply Chain Event Management
- e-Procurement
- e-Sourcing
- Vision and discussion papers on Digital Economy
- e-Business standards
- Enterprise Architecture and implementation issues
- Interaction, collaboration and negotiation models
- Trading agents
- Risk and knowledge management
- Semantic Web technologies
- Dynamic organisational issues and distributed agents
- Scalability issues in (fully) automated trading environments
- Real-world applications and business scenarios
- Computational platforms for supporting Digital Economy
- Very large databases for Digital Economy

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

**Deadlines**

Submission of Papers: 15 January 2017  
Notification of Acceptance: 16 February 2017  
Upload of Final Publication Files: 2 March 2017

**Email & Contact Details:**

Dr. Arkadiusz Kawa, Poznan University of Economics and Business, Poland, al.Niepodleglosci 10, 61-875 Poznań, [arkadiusz.kawa@ue.poznan.pl](mailto:arkadiusz.kawa@ue.poznan.pl)

Dr. Yun-Heh (Jessica) Chen-Burger, School of Mathematical & Computer Sciences Room G.38, Earl Mountbatten Building Heriot-Watt University Riccarton, Edinburgh, EH14 4AS United Kingdom, [y.j.chenburger@hw.ac.uk](mailto:y.j.chenburger@hw.ac.uk).