Keynote title: **DSS, Classifications, Trends, and Enabling Modern Information and Communication Technologies**

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Abstract
A *Decision Support System* (DSS) can be defined as an anthropocentric and evolving information system which is meant to implement the functions of a human support system that would otherwise be necessary to help the decision-maker to overcome his/her limits and constraints he/she may encounter when trying to solve complex and complicated decision problems that count (Filip, 2008). The purpose of the talk is to present the impact of modern *Information and Communication Technologies* (I&CT) on DSS domain with particular emphasis on the systems that support collaborative decision-making activities. Consequently, the talk is composed of three parts as it follows.

In the first part, several basic aspects concerning decisions and decision makers are reviewed in the context of modern business models and process and management automation solutions, including IPA (*Intelligent Process Automation*), which is meant to liberate the human of ”robot-type” operations. The evolution of models of human-automation device systems, from ”either/or automation” to ”shared and cooperative” control solutions (Flemisch et al, 2012), receive particular attention together with the explanation of causes for wrong decisions (Power, Mitra, 2016).

The second part of the talk addresses several aspects concerning the DSS domain such as: basic concepts, classifications and evolutions. A number of classifications made in accordance with attributes such as: purpose, dominant technology, number of users, and real-time usage in crisis situations are presented. Collaborative systems (Nof, 2017; Filip at al, 2017) and ”mixt knowledge” (Filip, 2008) solutions are described in details.

In the third part of the talk, several I&C technologies, such as *Big Data* (Shi, 2015), *Cloud* and *Mobile Computing*, and *Cognitive Systems* (High, 2012; Tecuci et al, 2016), are presented as viewed from the perspective of their relevance to modern computer supported collaborative decision-making. Two application examples are presented with a view to illustrating the usage of Big Data, and Cloud Computing and Service Oriented Architectures, respectively. A list of concerns and open problems regarding the impact of new I&C technologies on human being’s personal and professional life is eventually evoked.

Selected References

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