



The  
University  
Of  
Sheffield.

Automatic  
Control and  
Systems  
Engineering

The Department of Automatic Control & Systems Engineering  
is pleased to announce the following joint seminar:

### **Real-time Multi-Criteria Decision Making in Swarm Intelligence**

**Professor Sanaz Mostaghim**

*Institute for Intelligent Cooperating Systems  
Otto von Guericke University of Magdeburg, Germany*

**Wednesday, 15 February 2017 at 14:00**

LT02, Sir Henry Stephenson Building

#### **Abstract**

Swarm intelligence is known as one of the popular approaches in computational intelligence. It models a collective behavior of simple individuals with simple rules and local interactions. In nature, swarm intelligent systems are known to be flexible, robust against failures and adaptive to the changes in the environment. The major focus of this talk is on the swarm intelligent approaches for technical systems with social and cooperative behavior in unknown dynamic environments. Particularly, multi-criteria decision-making at real-time will be addressed. The application and the corresponding challenges in swarm robotics using flying objects and real-time simulations will be presented.

#### **Biography**

Sanaz Mostaghim is a professor of computer science at the Otto von Guericke University Magdeburg, Germany. She holds a PhD degree (2004) in electrical engineering from the University of Paderborn, Germany. Sanaz has worked as a postdoctoral fellow at ETH Zurich in Switzerland (2004-2006) and as a lecturer at Karlsruhe Institute of Technology (KIT), Germany (2006-2013), where she received her habilitation degree in applied computer science in 2012. Her research interests are in the area of swarm intelligence, evolutionary multi-objective optimization, and their applications in robotics and science. Sanaz is an active member of IEEE Computational Intelligence Society (CIS) and serves as a member of the CIS Administration Committee (AdCom). She is associate editor of IEEE Transactions on evolutionary computation, IEEE Transactions on emerging technologies, IEEE Transactions on cybernetics and member of the editorial board of Springer Journal on Complex and Intelligent Systems.

*Light refreshments will be served in the  
foyer of the Sir Henry Stephenson Building following the seminar*