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22 March 2016 – 02:00 p.m

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**Computational models of human behaviour for informing design through simulation:
an agent based approach applied to crisis management.**

Abstract:

For many years we have been striving to understand human behaviour and our interactions with our socio-technological environment. By advancing our knowledge in this area, we have helped the design of new or improved work processes and technologies. Historically, much of the work in analysing social interactions has been conducted within the social sciences. However, computer simulation has brought an extra tool in trying to understand and model human behaviours. Using an agent based approach; this presentation describes my work in constructing computational models of human behaviour for informing design through simulation. The challenges associated with modelling human behaviour and developing agent based models will be discussed along with some specific solutions. With examples from projects in the area of crisis and emergency management, I will look at how we can improve work situations through simulation. Looking forward to the future, I discuss how the increasing prevalence of artificial agents in our society will cause us to re-examine the new types of interactions and cooperative behaviours that will emerge.

Bio:

She is the leader of the MAGMA multi-agent systems research team, which is part of the [LIG \(link is external\)](#), and an Associate Professor at [Université Pierre Mendès France \(link is external\)](#) (also known as the University of Grenoble 2). In 2013, she received my HDR from University Joseph Fourier, Grenoble.

She is also an Adjunct Full Professor at the [University of Agder \(link is external\)](#) where she does research in the Centre for Integrated Emergency Management ([CIEM \(link is external\)](#)) and teaches on the [Information and Communications Technology Masters \(link is external\)](#).

In addition she is President of the [ISCRAM Association \(link is external\)](#) (Information Systems for Crisis Response and Management).

From 2003 until 2006, she was an associated researcher in the [IIHM Team \(link is external\)](#) (Engineering Human-Computer Interaction Team) here in Grenoble.

From 1998 until 2006 she was a researcher with the GRIC-IRIT Team ([link is external](#)) (Cognitive Engineering Research Team). This was later merged into other teams and was somewhat lost in reorganisation. However, it would now fall into the Interaction, Coopération, Adaptation par l'Expérimentation ([ICARE \(link is external\)](#)) research axe of [IRIT \(link is external\)](#), the Computer Science Research Institute of Toulouse. She still has close connections with people in this axe and continue to work with its members and ex-members.

Before coming to France, she was an Associate Professor in computing at [De Montfort University \(link is external\)](#). She received her Ph.D from the [University of Buckingham \(link is external\)](#) in 1994 in the area of artificial intelligence and the title of her PhD thesis was: "Cooperative Problem Solving using Assumption Based Truth Maintenance".