



SEMINARIO

Departamento de Sistemas Informáticos y Computación

Facultad de Informática
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Adaptation and Awareness in
Ensembles

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Sala de Grados
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Informática

Martin Wirsing
LMU Muenchen

Martin Wirsing is Full Professor and Chair for Computer Science at LMU Munich, where he is also the Vice-President for Studies. His current research interests comprise software engineering for adaptive self-aware systems and service-oriented systems, as well as software development based on formal methods. In 2006-2010 he was chairman of the scientific committee of INRIA (France). Currently he is coordinating the IP project ASCENS and actively participating in the EC network of excellence NESSOS. He is also the chairman of the scientific committee of the IMT Ph.D. School in Lucca (Italy).

The ASCENS project (<http://www.ascens-ist.eu/>) researches foundations of and software-engineering methods for ensembles - distributed autonomous systems operating in complex environments which can dynamically adapt to changes in their environment or requirements. We will discuss the notions of adaptation, awareness and emergence which play an important role in the development of ensembles. These terms will be made precise by giving a system model for ensembles on which a mathematical theory of adaptation and awareness can be based. Using this theory we can precisely distinguish different kinds of adaptation, such as adaptation to environment, network or goals, and we can discuss how adaptation, awareness and self-awareness are related.