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An ambient ASM specification of a client-centric cloud interaction architecture

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Abstract: For engagement in cloud computing concerns of clients regarding lock-in, unavailability of services, performance as well as security and privacy are major obstacles. In the talk a client-side middleware will be proposed, which gives full control over applications running in the cloud to the client. In particular, identification, authentication and authorisation are to be controlled by the client, and ubiquity with respect to various cloud providers and client-side devices will be supported. A specification of a ground model for this client-cloud-interaction architecture will be presented, which is based on ambient Abstract State Machines, a novel approach in rigorous software engineering combining state-based Abstract State Machines with Cardelli's ambient calculus.

Bio: Klaus-Dieter Schewe studied Mathematics and Computer Science at the University of Bonn, Germany. He received his PhD in Mathematics 1985 from University of Bonn, and his DSc in Theoretical Computer Science 1995 from Brandenburgian University of Technology. He worked in industry and industrial research with Bosch, Philips and others. He was Associate Professor for Computer Science at Clausthal University of Technology from 1994 until 1999, and Full Professor for Information Systems at Massey University, New Zealand 2000-2008. He led the New Zealand Information Science Research Centre 2002-2010. Since 2010 he is the scientific director of the Software Competence Center Hagenberg, honorary Professor at Johannes-Kepler-University Linz and director of the Christian Doppler Laboratory for Client-Centric Cloud Computing in Hagenberg, Austria. His main research interest are in mathematical and logical aspects of Software Science, formal specification and semantics, complex data structures and database theory, and internet-enabled systems including cloud computing, web services and web information systems. He is co-founder of conference and workshop series such as Foundations of Data and Knowledge Systems (FoIKS), Semantics of Data and Kowledge Bases (SDKB), Asia-Pacific Conference on Conceptual Modelling (APCCM) and Conceptual Modelling of Services (CMS). He has published over 250 rticles in journal and conference proceedings. In New Zealand he received twice rewards as "Distinguished Researcher".

Organizer	**Ph.D. Coordinator**
Prof. Luisa Massari	Prof. M. Calzarossa

The seminar will take place in English
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