

Keynote Speaker

Communication in Decentralised Systems

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Abstract— Modern applications as they are used for instance within Industry 4.0 systems rather build on peer-to-peer than client-server-based system architectures and functional principles. The highly dynamic character of those systems requires many new configuration and maintenance activities. New communication principles based on random walkers and new kinds of group communication are the probate tools to satisfy the respective requirements. After a discussion of some innovative communication principles in the beginning of the talk, it is intended to show on two examples, how self-organising, adaptive and flexible structures can be emerge and how they can be used for a variety of tasks.

Prof. Dr.-Ing. habil. Herwig Unger received his PhD with a work on Petri Net transformation in 1994 from the Technical University of Ilmenau and his doctorate (habilitation) with a work on large distributed systems from the University of Rostock in 2000. Since 2006, he is a full professor at the FernUniversität in Hagen and the head of the Chair of Communication Networks. His research interests are in decentralised systems and self-organization, natural language processing, as well as large scale simulations. He has published more than 140 publications in refereed journals and conferences, published or edited more than 25 books and gave over 35 invited talks and lectures in 12 countries.

BIOGRAPHY



Dr.-Ing. Mario Kubek is a researcher at the Chair of Communication Networks of the FernUniversität in Hagen. He received his PhD in 2012 with a thesis on locally working agents to improve the search for web documents. His research focus is on natural language processing, text mining and semantic information retrieval in large distributed systems. His further research interests include topic and trend detection in diachronic text corpora and contextual information processing in mobile computing environments.