

Prof. Manfred Hauswirth (DERI Galway, Ireland): Linking the real world

Abstract:

Until now the virtual world of information sources on the World Wide Web and activities in the real world have always been separated. However, knowledge accessible on the Web (the virtual world) may influence activities in the real world and vice versa, but these influences are usually indirect and not immediate. We still lack means to interconnect and link this information in a meaningful, general-purpose, and simple way. In this talk, I will present ongoing work and open research problems in this domain which aims at enabling novel ways for humans to interact with their environment and facilitating interactions among entities of the physical world (Internet of Things). As this requires the combination of approaches from diverse areas - Semantic Web, Linked Data, business processes, databases, distributed systems, sensor networks, etc. - I will specifically focus on cross-domain problems and open research questions and outline a research agenda to address them.

Manfred Hauswirth (<http://www.manfredhauswirth.org/>) is Vice-Director of the Digital Enterprise Research Institute (DERI), Galway, Ireland and professor at the National University of Ireland, Galway (NUIG). He holds an M.Sc. (1994) and a Ph.D. (1999) in computer science from the Technical University of Vienna. His main research interests are on semantic sensor networks, sensor networks middleware, large-scale semantics-enabled distributed information systems and applications, peer-to-peer systems, Internet of Things, self-organization and self-management, Semantic Web services, and distributed systems security. He has published over 130 papers in these domains, he has co-authored a book on distributed software architectures and several book chapters on P2P data management and semantics. He has served in over 170 program committees of international scientific conferences and was program co-chair of the Seventh IEEE International Conference on Peer-to-Peer Computing in 2007, general chair of the Fifth European Semantic Web Conference in 2008, program co-chair of the 10th International Conference on Ontologies, DataBases, and Applications of Semantics (ODBASE) and the 12th International Conference on Web Information System Engineering (WISE) in 2011. He is a member of IEEE and ACM and is on the board of WISEN, the Irish Wireless Sensors Enterprise Led Network, the scientific board of the Corporate Semantic Web research center at FU Berlin, and the Scientific Advisory Board of the Center for Sensor Web Technologies (CLARITY) in Dublin, Ireland.