

## Keynote Talk: Collaborative Multi-Expert-Systems

Klaus-Dieter Althoff, University of Hildesheim (UHI), Germany

**Abstract** Expert systems solve problems within a specialized domain that ordinarily requires human expertise. Although, there exist a lot of successful expert systems and in general they are known for suffering from the knowledge acquisition bottleneck. This talk presents a research vision that aims at overcoming this problem by systematically considering multiple experts (systems) as well as the wisdom of the crowd. The corresponding software architecture integrates concepts from software engineering (experience factory, software product lines) and artificial intelligence (multi-agent systems, case-based reasoning). In the scope of this research case-based reasoning is used in various ways: for representing and processing the experience part of expertise, for supporting continuous knowledge evolution and increasing knowledge formalization, as well as for providing an open framework for constructing learning expert systems. The current state of implementation is presented as along with open challenges and an outlook on future research.