Analysis of Autonomous Mobile Collectives in Complex Physical Environments

21–23 October

	Monday	Tuesday	Wednesday
9:00 9:30	Introductions	***Industry Challenges*** J. Brauer: *Verification of Autonomous Transport Systems - Some Industrial Prospects* S. Fröschle: *Trustworthy identity and key management for mobile systems in transportation*	*Break-out session*
10:00–10:30	break	break	break
10:30 10:50 11:10 11:30	***Individual Properties*** P.G. Larsen/F. Foldager: *A Journey Towards a Fleet of Autonomous Robots for Agricultural Field Operations* J.B. Jeannin: *Collision avoidance and path replanning of individual farm robots* A. Fantechi: *Safety aspects of autonomous systems* P.C. Ölveczky: *Formal modeling and analysis of real-time systems using Real-Time Maude*	***Uncertainty Modelling*** K.G. Larsen: *Synthesis of Safe, Optimal and Small Strategies for Advanced Driver Assistance using UPPAAL Stratego* D. Parker: *Probabilistic model checking for safety and performance guarantees* R. Calinescu: *Stochastic modelling underpinning the engineering of trustworthy autonomous systems* M. Gleirscher: *Risk Structures*	*Break-out and discussion* *Closing discussion*
12:15–13:30	lunch	lunch	lunch
13:30 13:50 14:10 14:30	***Collective Properties*** M. Waga: *Optimization of the watering schedule by run-time and design-time analysis* É. André: *White-box and black-box quantitative verification of timing properties* P. Ribeiro: *Modelling and Verification using RoboChart* (spare)	***Individual Properties*** C. Heinzemann: *Context Analysis and Requirements Derivation with SCODE* S. Bogomolov: *Trusted Autonomous Systems: Verification Meets Falsification* S. Mitsch: *Modular Verification of Cyber-Physical Systems in KeYmaeraX* (spare)	
15:00–15:30	break	break	
15:30 16:00 16:30 17:00	*Break-out session* *Discussion of results*	*Break-out session* *Discussion of results*	
18:00	dinner	dinner	