

Reihe 10

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Nr. 848

Herwig Unger, Wolfgang A. Halang (Eds.)

Autonomous Systems 2016

Proceedings of the
9th GI Conference



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To meet the expectations raised by the terms Industrie 4.0, Industrial Internet and Internet of Things, real innovations are necessary, which can be brought about by information processing systems working autonomously. Owing to their growing complexity and their embedding in complex environments, their design becomes increasingly critical. Thus, the topics addressed in this book span from verification and validation of safety-related control software and suitable hardware designed for verifiability to be deployed in embedded systems over approaches to suppress electromagnetic interferences to strategies for network routing based on centrality measures and continuous re-authentication in peer-to-peer networks. Methods of neural and evolutionary computing are employed to aid diagnosing retinopathy of prematurity, to invert matrices and to solve non-deterministic polynomial-time hard problems. In natural language processing, interface problems between humans and machines are solved with graph-based text representation and word segmentation. Finally, related aspects of teaching are discussed.

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