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## Autonomous Systems 2014

Proceedings  
of the 7<sup>th</sup> GI Workshop



**FernUniversität in Hagen**  
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Unger, Herwig; Halang, Wolfgang A. (Eds.)

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**Keywords:** Autonomous Systems – Embedded Systems – Real-time Systems – Communication Networks – System Design – Self-organisation – Adaption – Security

As foundations of autonomous (computing) systems, hardware modules being fast and as compact as on-chip networks, novel hardware-based security and the verification procedures to prove their dependability are considered. Owing to their growing complexity and their embedding in complex environments, their design becomes more and more tedious. As a relief in this situation, interdisciplinary ideas combining models, analytical methods, simulations and architectural concepts are developed. Matching autonomous systems' broad application range, theoretical approaches and algorithmic solutions based on game theory, graphs and Petri nets, security, data mining and classification aim to ensure secure, fault-tolerant and interruption-free operation and data communication with their environments. It is striven to endow autonomous systems with capabilities of self-organisation and adaptability as necessary to meet the needs of users and the surrounding world by employing methods from statistics, machine learning, searching, content and natural language processing.

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