Martin E TÃ¶rngren

List of Publications by Year
in descending order

122 papers	2,388 citations	516215 16 h-index	288905 40 g-index
129 all docs	129 docs citations	129 times ranked	1997 citing authors

#	Article	IF	Citations
1	Model-Based Systems Engineering Tool-Chain for Automated Parameter Value Selection. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 2333-2347.	5.9	11
2	Security Awareness in the Internet of Everything. , 2022, , 1-30.		0
3	Traction Adaptive Motion Planning and Control at the Limits of Handling. IEEE Transactions on Control Systems Technology, 2022, 30, 1888-1904.	3.2	5
4	Evaluating Sequential Reasoning about Hidden Objects in Traffic. , 2022, , .		0
5	Edge Computing for Cyber-physical Systems: A Systematic Mapping Study Emphasizing Trustworthiness. ACM Transactions on Cyber-Physical Systems, 2022, 6, 1-28.	1.9	12
6	Shape Estimation of a 3D Printed Soft Sensor Using Multi-Hypothesis Extended Kalman Filter. IEEE Robotics and Automation Letters, 2022, 7, 8383-8390.	3.3	5
7	Cyber-physical systems research and education in 2030: Scenarios and strategies. Journal of Industrial Information Integration, 2021, 21, 100192.	4.3	22
8	A Data-Driven Method Towards Minimizing Collision Severity for Highly Automated Vehicles. IEEE Transactions on Intelligent Vehicles, 2021, 6, 723-735.	9.4	18
9	Fusion of Heterogeneous Friction Estimates for Traction Adaptive Motion Planning and Control. , 2021, , .		6
10	Design Ontology in a Case Study for Cosimulation in a Model-Based Systems Engineering Tool-Chain. IEEE Systems Journal, 2020, 14, 1297-1308.	2.9	11
11	A domain-specific modeling approach supporting tool-chain development with Bayesian network models. Integrated Computer-Aided Engineering, 2020, 27, 153-171.	2.5	3
12	The Role of Competence Networks in the Era of Cyber-Physical Systems â€" Promoting Knowledge Sharing and Knowledge Exchange. IEEE Design and Test, 2020, 37, 8-15.	1.1	9
13	A Permissioned Blockchain Based Feature Management System for Assembly Devices. IEEE Access, 2020, 8, 183378-183390.	2.6	2
14	Probabilistic Inference of Fault Condition of Cyber-Physical Systems Under Uncertainty. IEEE Systems Journal, 2020, 14, 3256-3266.	2.9	4
15	Uncertainty Management in Situation Awareness for Cyber-Physical Systems. , 2020, , .		1
16	Competence Networks in the Era of CPS â€" Lessons Learnt in the ICES Cross-Disciplinary and Multi-domain Center. Lecture Notes in Computer Science, 2020, , 264-283.	1.0	0
17	An Open Source Lifecycle Collaboration Approach Supporting Internet of Things System Development. , 2019, , .		2
18	Towards a taxonomy of technical debt for COTS-intensive cyber physical systems. Procedia Computer Science, 2019, 153, 108-117.	1.2	4

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19	A literature review on obsolescence management in COTS-centric cyber physical systems. Procedia Computer Science, 2019, 153, 135-145.	1.2	7
20	Trends in preparing cyber-physical systems engineers. Cyber-Physical Systems, 2019, 5, 65-91.	1.6	12
21	Efficient State Update Exchange in a CPS Environment for Linked Data-based Digital Twins. , 2019, , .		1
22	Adaptive Trajectory Planning and optimization at Limits of Handling. , 2019, , .		14
23	Pre-Crash Vehicle Control and Manoeuvre Planning: A Step Towards Minimizing Collision Severity for Highly Automated Vehicles. , 2019, , .		6
24	Digitalizing Swedish industry: What is next?. Computers in Industry, 2019, 105, 153-163.	5.7	62
25	Security Awareness in the Internet of Everything. Advances in Computer and Electrical Engineering Book Series, 2019, , 272-301.	0.2	2
26	Connected things connecting Europe. Communications of the ACM, 2019, 62, 46-46.	3.3	3
27	How to Deal with the Complexity of Future Cyber-Physical Systems?. Designs, 2018, 2, 40.	1.3	53
28	A Service-Oriented Tool-Chain for Model-Based Systems Engineering of Aero-Engines. IEEE Access, 2018, 6, 50443-50458.	2.6	15
29	Architecting Safety Supervisors for High Levels of Automated Driving. , 2018, , .		11
30	Safe Stop Trajectory Planning for Highly Automated Vehicles: An Optimal Control Problem Formulation. , 2018, , .		19
31	Design Optimization of Cyber-Physical Systems by Partitioning and Coordination: A Study on Mechatronic Systems. , 2018, , .		0
32	Experience from Introducing Systems Engineering in an Academic Environment Using an Industry Training Course. Incose International Symposium, 2018, 28, 245-259.	0.2	2
33	Complexity Challenges in Development of Cyber-Physical Systems. Lecture Notes in Computer Science, 2018, , 478-503.	1.0	38
34	Towards A Service-oriented Framework for MBSE Tool-chain Development. , 2018, , .		7
35	A Tool Integration Language to Formalize Co-simulation Tool-Chains for Cyber-Physical System (CPS). Lecture Notes in Computer Science, 2018, , 391-405.	1.0	2
36	Empirical-Evolution of Frameworks Supporting Co-simulation Tool-Chain Development. Advances in Intelligent Systems and Computing, 2018, , 813-828.	0.5	6

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37	Tuning Permissiveness of Active Safety Monitors for Autonomous Systems. Lecture Notes in Computer Science, 2018, , 333-348.	1.0	5
38	Strategies and considerations in shaping cyber-physical systems education. ACM SIGBED Review, 2017, 14, 53-60.	1.8	21
39	Educating embedded systems hackers. ACM SIGBED Review, 2017, 14, 8-15.	1.8	2
40	A Case Study on Achieving Fair Data Age Distribution in Vehicular Communications. , 2017, , .		5
41	An Investigation of Functionalities of Future Toolâ€chain for Aerospace Industry. Incose International Symposium, 2017, 27, 1408-1422.	0.2	10
42	Architecture exploration for distributed embedded systems: a gap analysis in automotive domain. , 2017, , .		4
43	ATRIUM â€" Architecting under uncertainty: For ISO 26262 compliance. , 2017, , .		4
44	Functional Safety and Evolvable Architectures for Autonomy. , 2017, , 547-560.		4
45	Systems Engineering and Architecting for Intelligent Autonomous Systems. , 2017, , 313-351.		0
46	A Method towards the Systematic Architecting of Functionally Safe Automated Driving- Leveraging Diagnostic Specifications for FSC design. , 2017, , .		2
47	Architecture and Safety for Autonomous Heavy Vehicles: ARCHER. , 2017, , 571-581.		0
48	A Functional Brake Architecture for Autonomous Heavy Commercial Vehicles. , 2016, , .		3
49	Ontological reasoning for consistency in the design of cyber-physical systems. , 2016, , .		12
50	Formulating customized specifications for resource allocation problem of distributed embedded systems. , 2016, , .		1
51	Experiences and reflections on three years of CPS summer schools within EIT digital. , 2016, , .		3
52	Towards integration of CPS and systems engineering in education. , 2016, , .		11
53	Challenges in Architecting Fully Automated Driving; with an Emphasis on Heavy Commercial Vehicles. , 2016, , .		6
54	A functional reference architecture for autonomous driving. Information and Software Technology, 2016, 73, 136-150.	3.0	76

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55	Architecture Challenges for Intelligent Autonomous Machines. Advances in Intelligent Systems and Computing, 2016, , 1669-1681.	0.5	6
56	Security-Aware Development of Cyber-Physical Systems Illustrated with Automotive Case Study. , 2016, , .		14
57	Education and training challenges in the era of Cyber-Physical Systems. , 2015, , .		13
58	Requirements Engineering for Control and Computing Systems at large research facilities: Process implementation and a case study. Incose International Symposium, 2015, 25, 68-82.	0.2	0
59	Current status and advancement of cyber-physical systems in manufacturing. Journal of Manufacturing Systems, 2015, 37, 517-527.	7.6	704
60	The Need for a Confidence View of CPS Support Environments (Fast Abstract). , 2015, , .		1
61	The discourse on tool integration beyond technology, a literature survey. Journal of Systems and Software, 2015, 106, 117-131.	3.3	9
62	Analyzing semantic relationships between multiformalism models for inconsistency management. , 2015, , .		3
63	Design-Space Reduction for Architectural Optimization of Automotive Embedded Systems. , 2015, , .		4
64	A Functional Architecture for Autonomous Driving. , 2015, , .		73
65	Experience on applying software architecture recovery to automotive embedded systems. , 2014, , .		4
66	Integrating viewpoints in the development of mechatronic products. Mechatronics, 2014, 24, 745-762.	2.0	77
67	On the modeling and generation of service-oriented tool chains. Software and Systems Modeling, 2014, 13, 461-480.	2.2	18
68	Towards curricula for Cyber-Physical Systems. , 2014, , .		5
69	Educating Embedded Systems Hackers. , 2014, , .		2
70	On Integrating EAST-ADL and UPPAAL for Embedded System Architecture Verification. Embedded Systems, 2014, , 85-99.	0.6	2
71	3rd Workshop on Architecting Safety in Collaborative Mobile Systems (ASCoMS). Lecture Notes in Computer Science, 2014, , 1-2.	1.0	0
72	A reference architecture for cooperative driving. Journal of Systems Architecture, 2013, 59, 1095-1112.	2.5	32

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73	Efficient Construction of Presentation Integration for Web-Based and Desktop Development Tools. , 2013, , .		2
74	A characterization of integrated multi-view modeling in the context of embedded and cyber-physical systems. , 2013, , .		36
75	Cyber-physical system design contracts. , 2013, , .		82
76	Structuring Safety Requirements in ISO 26262 Using Contract Theory. Lecture Notes in Computer Science, 2013, , 166-177.	1.0	16
77	Component-Based Development. , 2013, , 179-212.		0
78	Architecture Exploration. , 2013, , 145-178.		0
79	Viewpoints, formalisms, languages, and tools for cyber-physical systems. , 2012, , .		53
80	An Estimation Model for the Savings Achievable by Tool Chains. , 2012, , .		0
81	High-Level Specification and Code Generation for Service-Oriented Tool Adapters. , 2012, , .		7
82	A Cost-Efficiency Model for Tool Chains. , 2012, , .		1
83	Tool Integration, from Tool to Tool Chain with ISO 26262. , 2012, , .		4
84	A Concept for Secure Production Programming of Embedded Industrial Field Devices. , 2011, , .		0
85	From EAST-ADL to AUTOSAR Software Architecture: A Mapping Scheme. Lecture Notes in Computer Science, 2011, , 328-335.	1.0	10
86	Generic Fault Modelling for Fault Injection. Lecture Notes in Computer Science, 2011, , 287-296.	1.0	3
87	Verifying system behaviors in EAST-ADL2 with the SPIN model checker. , 2010, , .		10
88	Integrating safety analysis into the model-based development toolchain of automotive embedded systems. ACM SIGPLAN Notices, 2010, 45, 125-132.	0.2	11
89	Integrating safety analysis into the model-based development toolchain of automotive embedded systems. , 2010, , .		24
90	MODIFI: A MODel-Implemented Fault Injection Tool. Lecture Notes in Computer Science, 2010, , 210-222.	1.0	51

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91	Model-Implemented Fault Injection for Hardware Fault Simulation. , 2010, , .		20
92	An Executable Design Decision Representation Using Model Transformations. , 2010, , .		1
93	11 The EAST-ADL Architecture Description Language for Automotive Embedded Software. Lecture Notes in Computer Science, 2010, , 297-307.	1.0	34
94	17 Towards Model-Based Engineering of Self-configuring Embedded Systems. Lecture Notes in Computer Science, 2010, , 345-353.	1.0	1
95	Autonomic Middleware for Automotive Embedded Systems. , 2009, , 169-210.		5
96	Self configuration of dependent tasks for dynamically reconfigurable automotive embedded systems. , 2008, , .		3
97	Supporting an Automotive Safety Case through Systematic Model Based Development - the EAST-ADL2 Approach. , 2008, , .		3
98	Modelling Support for Design of Safety-Critical Automotive Embedded Systems. Lecture Notes in Computer Science, 2008, , 72-85.	1.0	31
99	Model-Based Development of Automotive Embedded Systems. Industrial Information Technology Series, 2008, , 258-309.	0.2	10
100	Experiences from large embedded systems development projects in education, involving industry and research. ACM SIGBED Review, 2007, 4, 55-63.	1.8	14
101	Managing Complexity of Automotive Electronics Using the EAST-ADL. , 2007, , .		22
102	Experiences from Model Supported Configuration Management and Production of Automotive Embedded Software. , 2007, , .		0
103	Towards Improving Dependability of Automotive Systems by Using the EAST-ADL Architecture Description Language. Lecture Notes in Computer Science, 2007, , 39-65.	1.0	9
104	Tool supporting the co-design of control systems and their real-time implementation: Current status and future directions. , 2006, , .		10
105	Tool Supporting the Co-design of Control Systems and Their Real-time Implementation: Current Status and Future Directions. , 2006, , .		11
106	THE EFFECT OF RANDOMLY TIME-VARYING SAMPLING AND COMPUTATIONAL DELAY. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 209-218.	0.4	1
107	7.1.1 Integrating Views in a Multiâ€view Modelling Environment. Incose International Symposium, 2005, 15, 974-988.	0.2	1
108	ODEEP - Open Dependable Electrical and Electronics Platform â€“ Concept and Projects. , 2005, , .		1

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109	How should embedded systems be taught?. ACM SIGBED Review, 2005, 2, 34-39.	1.8	11
110	Vehicle Applications of Controller Area Network. , 2005, , 741-765.		117
111	What is embedded systems and how should it be taught?---results from a didactic analysis. Transactions on Embedded Computing Systems, 2005, 4, 633-651.	2.1	45
112	Lessons Learned from Model Based Development of a Distributed Embedded Automotive Control System. , 2004, , .		2
113	A Modeling Framework for Automotive Embedded Control Systems. , 2004, , .		1
114	A metrics system for quantifying operational coupling in embedded computer control systems. , 2004, , .		4
115	The AIDA toolset for design and implementation analysis of distributed real-time control systems. Microprocessors and Microsystems, 2004, 28, 163-182.	1.8	16
116	The science and education of mechatronics engineering. IEEE Robotics and Automation Magazine, 2001, 8, 20-26.	2.2	39
117	Fundamentals of Implementing Real-Time Control Applications in Distributed Computer Systems. Real-Time Systems, 1998, 14, 219-250.	1.1	95
118	Introducing distributed control in mobile machines based on hydraulic actuators. Mechatronics, 1994, 4, 139-157.	2.0	4
119	Real-time control of physically distributed systems. Computers and Electrical Engineering, 1992, 18, 51-72.	3.0	3
120	Semi-Automatic FMEA Supporting Complex Systems with Combinations and Sequences of Failures. SAE International Journal of Passenger Cars - Mechanical Systems, 0, 2, 791-802.	0.4	16
121	AD-EYE: A Co-Simulation Platform for Early Verification of Functional Safety Concepts. , 0, , .		3
122	Defining Fundamental Vehicle Actions for the Development of Automated Driving Systems. , 0, , .		2