

# Hartmut K Schmeck

## List of Publications by Year in descending order

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152  
papers

3,546  
citations

304602

22  
h-index

206029

48  
g-index

170  
all docs

170  
docs citations

170  
times ranked

2430  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ant colony optimization for resource-constrained project scheduling. IEEE Transactions on Evolutionary Computation, 2002, 6, 333-346.	7.5	530
2	Guidance in evolutionary multi-objective optimization. Advances in Engineering Software, 2001, 32, 499-507.	1.8	257
3	A Multi-population Approach to Dynamic Optimization Problems. , 2000, , 299-307.		201
4	Portfolio optimization with an envelope-based multi-objective evolutionary algorithm. European Journal of Operational Research, 2009, 199, 684-693.	3.5	147
5	Multi Colony Ant Algorithms. Journal of Heuristics, 2002, 8, 305-320.	1.1	138
6	Adaptivity and self-organization in organic computing systems. ACM Transactions on Autonomous and Adaptive Systems, 2010, 5, 1-32.	0.4	128
7	Organic computing - a new vision for distributed embedded systems. , 2005, , .		120
8	Designing Evolutionary Algorithms for Dynamic Optimization Problems. Natural Computing Series, 2003, , 239-262.	2.2	109
9	Dynamic scheduling of tasks on partially reconfigurable FPGAs. IEE Proceedings: Computers and Digital Techniques, 2000, 147, 181.	1.6	98
10	Modeling and Valuation of Residential Demand Flexibility for Renewable Energy Integration. IEEE Transactions on Smart Grid, 2017, 8, 2565-2574.	6.2	96
11	Improving Electric Vehicle Charging Coordination Through Area Pricing. Transportation Science, 2014, 48, 619-634.	2.6	69
12	Organic Computing &#150; Addressing Complexity by Controlled Self-Organization. , 2006, , .		68
13	Experiences with fineâ€grainedparallel genetic algorithms. Annals of Operations Research, 1999, 90, 203-219.	2.6	61
14	Observation and Control of Organic Systems. , 2011, , 325-338.		61
15	Systolic Sorting on a Mesh-Connected Network. IEEE Transactions on Computers, 1985, C-34, 652-658.	2.4	55
16	FPGA implementation of population-based ant colony optimization. Applied Soft Computing Journal, 2004, 4, 303-322.	4.1	55
17	Energy Informatics. Business and Information Systems Engineering, 2014, 6, 25-31.	4.0	55
18	Multi-objective particle swarm optimization on computer grids. , 2007, , .		51

#	ARTICLE	IF	CITATIONS
19	Adaptive building energy management with multiple commodities and flexible evolutionary optimization. <i>Renewable Energy</i> , 2016, 87, 911-921.	4.3	50
20	Information Exchange in Multi Colony Ant Algorithms. <i>Lecture Notes in Computer Science</i> , 2000, , 645-652.	1.0	46
21	Efficient implementation of an active set algorithm for large-scale portfolio selection. <i>Computers and Operations Research</i> , 2008, 35, 3945-3961.	2.4	40
22	Organic traffic light control for urban road networks. <i>International Journal of Autonomous and Adaptive Communications Systems</i> , 2009, 2, 203.	0.2	39
23	Organic Control of Traffic Lights. <i>Lecture Notes in Computer Science</i> , 2008, , 219-233.	1.0	37
24	Decentralized evolution of robotic behavior using finite state machines. <i>International Journal of Intelligent Computing and Cybernetics</i> , 2009, 2, 695-723.	1.6	35
25	A threat analysis of the vehicle-to-grid charging protocol ISO 15118. <i>Computer Science - Research and Development</i> , 2018, 33, 3-12.	2.7	34
26	Organic Traffic Control. , 2011, , 431-446.		30
27	Organic smart home. , 2011, , .		29
28	The instruction systolic array and its relation to other models of parallel computers. <i>Parallel Computing</i> , 1988, 7, 25-39.	1.3	27
29	Distance Based Ranking in Many-Objective Particle Swarm Optimization. <i>Lecture Notes in Computer Science</i> , 2008, , 753-762.	1.0	26
30	Decentralised Progressive Signal Systems for Organic Traffic Control. , 2008, , .		23
31	Parallel multi-objective optimization using Master-Slave model on heterogeneous resources. , 2008, , .		22
32	Decentralized Energy-Management to Control Smart-Home Architectures. <i>Lecture Notes in Computer Science</i> , 2010, , 150-161.	1.0	20
33	Variable Preference Modeling Using Multi-Objective Evolutionary Algorithms. <i>Lecture Notes in Computer Science</i> , 2011, , 91-105.	1.0	20
34	Dictionary Machines for Different Models of VLSI. <i>IEEE Transactions on Computers</i> , 1985, C-34, 472-475.	2.4	18
35	Integration of electric vehicles in smart homes - an ICT-based solution for V2G scenarios. , 2012, , .		18
36	A Microservice Architecture for the Intranet of Things and Energy in Smart Buildings. , 2016, , .		18

#	ARTICLE	IF	CITATIONS
37	In Search of Equitable Solutions Using Multi-objective Evolutionary Algorithms. , 2010, , 687-696.		17
38	User behavior prediction for energy management in smart homes. , 2011, , .		17
39	User interaction interface for Energy Management in Smart Homes. , 2012, , .		17
40	Distribution of Evolutionary Algorithms in Heterogeneous Networks. Lecture Notes in Computer Science, 2004, , 923-934.	1.0	16
41	Smart Meter Gateways: Options for a BSI-Compliant Integration of Energy Management Systems. Applied Sciences (Switzerland), 2019, 9, 1634.	1.3	16
42	Hop count based distance estimation in mobile ad hoc networks “ Challenges and consequences. Ad Hoc Networks, 2014, 15, 39-52.	3.4	15
43	Building power demand forecasting using K-nearest neighbours model “ practical application in Smart City Demo Aspern project. CIRED - Open Access Proceedings Journal, 2017, 2017, 1601-1604.	0.1	15
44	A Reference Architecture for Self-organizing Service-Oriented Computing. Lecture Notes in Computer Science, 2008, , 205-219.	1.0	13
45	Assessing load flexibility in smart grids: Electric vehicles for renewable energy integration. , 2013, , .		13
46	Establishing a hardware-in-the-loop research environment with a hybrid energy storage system. , 2016, , .		13
47	Angle-Based Preference Models in Multi-objective Optimization. Lecture Notes in Computer Science, 2017, , 88-102.	1.0	13
48	Requirements for Power Hardware-in-the-Loop Emulation of Distribution Grid Challenges. , 2018, , .		13
49	Pheromone evaluation in Ant Colony Optimization. , 0, , .		12
50	Towards a Quantitative Notion of Self-organisation. , 2007, , .		12
51	Demand side management in smart buildings by intelligent scheduling of heat pumps. , 2014, , .		12
52	State-of-the-Art Integration of Decentralized Energy Management Systems into the German Smart Meter Gateway Infrastructure. Applied Sciences (Switzerland), 2020, 10, 3665.	1.3	12
53	A theoretical analysis of volume based Pareto front approximations. , 2014, , .		11
54	Towards the Modeling of Flexibility Using Artificial Neural Networks in Energy Management and Smart Grids. , 2018, , .		11

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55	Theory and Algorithms for Finding Knees. Lecture Notes in Computer Science, 2013, , 156-170.	1.0	11
56	Encodings for Evolutionary Algorithms in smart buildings with energy management systems. , 2014, , .		10
57	A neuro-genetic approach for modeling and optimizing a complex cogeneration process. Applied Soft Computing Journal, 2016, 48, 347-358.	4.1	10
58	A generic user interface for energy management in smart homes. Energy Informatics, 2018, 1, .	1.4	10
59	The influence of differential privacy on short term electric load forecasting. Energy Informatics, 2018, 1, .	1.4	10
60	Systolic sorting in a sequential input/output environment. Parallel Computing, 1986, 3, 11-23.	1.3	9
61	Service Discovery in Self-Organizing Service-Oriented Environments. , 2010, , .		9
62	Obtaining Optimal Pareto Front Approximations using Scalarized Preference Information. , 2015, , .		9
63	Evolutionary Optimization of Smart Buildings with Interdependent Devices. Lecture Notes in Computer Science, 2015, , 239-251.	1.0	9
64	Modeling flexibility using artificial neural networks. Energy Informatics, 2018, 1, .	1.4	9
65	A Framework for Incorporating Trade-Off Information Using Multi-Objective Evolutionary Algorithms. , 2010, , 131-140.		9
66	XCS Revisited: A Novel Discovery Component for the eXtended Classifier System. Lecture Notes in Computer Science, 2010, , 289-298.	1.0	9
67	Algebraic characterization of reducible flowcharts. Journal of Computer and System Sciences, 1983, 27, 165-199.	0.9	8
68	Possibilities and limitations of decentralised traffic control systems. , 2010, , .		8
69	Firefly-inspired synchronization for energy-efficient distance estimation in mobile ad-hoc networks. , 2012, , .		8
70	Hardware-in-the-Loop Co-simulation of a Smart Building in a Low-voltage Distribution Grid. , 2018, , .		8
71	Organic Computing: Quo vadis?. , 2011, , 615-627.		8
72	Distributed Geometric Distance Estimation in Ad Hoc Networks. Lecture Notes in Computer Science, 2012, , 28-41.	1.0	8

#	ARTICLE	IF	CITATIONS
73	Multiplication of Matrices With Different Sparseness Properties on Dynamically Reconfigurable Meshes. VLSI Design, 1999, 9, 69-81.	0.5	7
74	Population based ant colony optimization on FPGA. , 0, , .		7
75	Decentralised Route Guidance in Organic Traffic Control. , 2011, , .		7
76	Optimization of Operation and Control Strategies for Battery Energy Storage Systems by Evolutionary Algorithms. Lecture Notes in Computer Science, 2016, , 507-522.	1.0	7
77	Strategies for an Adaptive Control System to Improve Power Grid Resilience with Smart Buildings. Energies, 2021, 14, 4472.	1.6	7
78	A simulator for the reconfigurable mesh architecture. Lecture Notes in Computer Science, 1998, , 99-104.	1.0	7
79	A closer look at VLSI multiplication. The Integration VLSI Journal, 1988, 6, 345-359.	1.3	6
80	Title is missing!. Journal of Supercomputing, 2003, 26, 221-238.	2.4	6
81	A Study of Mobility in Ad Hoc Networks and Its Effects on a Hop Count Based Distance Estimation. , 2012, , .		6
82	Organic Architecture for Energy Management and Smart Grids. , 2015, , .		6
83	Comparison of Multi-objective Evolutionary Optimization in Smart Building Scenarios. Lecture Notes in Computer Science, 2016, , 443-458.	1.0	6
84	Provision of frequency containment reserve with an aggregate of air handling units. Computer Science - Research and Development, 2018, 33, 215-221.	2.7	6
85	Adaptivity and Self-organisation in Organic Computing Systems. , 2011, , 5-37.		6
86	Energy informatics. Communications of the ACM, 2022, 65, 58-63.	3.3	6
87	A fast sorting algorithm for VLSI. , 1983, , 408-419.		5
88	A Characterization of Key Properties of Environment-Mediated Multiagent Systems. Lecture Notes in Computer Science, 2007, , 17-38.	1.0	5
89	A Completely Evolvable Genotype-Phenotype Mapping for Evolutionary Robotics. , 2009, , .		5
90	Enabling Self-Organising Service Level Management with Automated Negotiation. , 2010, , .		5

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91	Organic Computing: A Grand Challenge for Mastering Complex Systems. IT - Information Technology, 2010, 52, 135-141.	0.6	5
92	Plug-and-Charge and E-Roaming " Capabilities of the ISO/IEC 15118 for the E-Mobility Scenario. Automatisierungstechnik, 2014, 62, 241-248.	0.4	5
93	Response of smart residential buildings with energy management systems to price deviations. , 2015, , .		5
94	Detecting Occupancy in Smart Buildings by Data Fusion from Low-cost Sensors. , 2017, , .		5
95	Multimodal scalarized preferences in multi-objective optimization. , 2017, , .		5
96	Measurement and Control of Self-organised Behaviour in Robot Swarms. , 2007, , 209-223.		5
97	Using Organic Computing to Control Bunching Effects. , 2008, , 232-244.		5
98	Improving XCS Performance by Distribution. Lecture Notes in Computer Science, 2008, , 111-120.	1.0	5
99	Towards a Deeper Understanding of Trade-offs Using Multi-objective Evolutionary Algorithms. Lecture Notes in Computer Science, 2012, , 396-405.	1.0	5
100	E-Energy " Paving the Way for an Internet of EnergyAuf dem Weg zum Internet der Energie. IT - Information Technology, 2010, 52, 55-57.	0.6	4
101	Stay real!. , 2012, , .		4
102	Smart grid services provided by building energy management systems. , 2015, , .		4
103	Automated generation of models for demand side flexibility using machine learning. , 2021, 1, 107-120.		4
104	A distributed genetic algorithm improving the generalization behavior of neural networks. Lecture Notes in Computer Science, 1995, , 107-121.	1.0	3
105	An Evolutionary Approach to Dynamic Task Scheduling on FPGAs with Restricted Buffer. Journal of Parallel and Distributed Computing, 2002, 62, 1407-1420.	2.7	3
106	Organic computing in off-highway machines. , 2010, , .		3
107	A Privacy-Aware Architecture for Energy Management Systems in Smart Grids. , 2014, , .		3
108	Utilization of Local Flexibility for Charge Management of a Battery Energy Storage System Providing Frequency Containment Reserve. Energy Procedia, 2018, 155, 443-453.	1.8	3

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109	Evolutionary Design of Emergent Behavior. Understanding Complex Systems, 2009, , 123-140.	0.3	3
110	State-based load profile generation for modeling energetic flexibility. Energy Informatics, 2019, 2, .	1.4	3
111	Evolving Collision Avoidance on Autonomous Robots. International Federation for Information Processing, 2008, , 85-94.	0.4	3
112	Systolic s/sup 2/-way merge sort is optimal. IEEE Transactions on Computers, 1989, 38, 1052-1056.	2.4	2
113	Assessing complexity of service-oriented computing using learning classifier systems. , 2009, , .		2
114	Adaption of XCS to multi-learner predator/prey scenarios. , 2010, , .		2
115	Self-organized invasive parallel optimization. , 2011, , .		2
116	Distributed swarm evacuation planning. , 2013, , .		2
117	On homogenization of coal in longitudinal blending beds. , 2014, , .		2
118	Designing K-nearest neighbors model for low voltage load forecasting. , 2017, , .		2
119	Demo abstract: a building energy management system in the context of the smart grid traffic light concept. Computer Science - Research and Development, 2018, 33, 269-270.	2.7	2
120	Test Beds for Component Integration in Energy Systems. , 2019, , .		2
121	Given's rotation on an instruction systolic array. Lecture Notes in Computer Science, 1989, , 340-346.	1.0	2
122	An Evolutionary Optimization Approach for Bulk Material Blending Systems. Lecture Notes in Computer Science, 2012, , 478-488.	1.0	2
123	Decentralised Energy Management for Smart Homes. , 2011, , 605-607.		2
124	Algebraic semantics of recursive flowchart schemes. Lecture Notes in Computer Science, 1982, , 489-501.	1.0	1
125	Algebraic semantics of recursive flowchart schemes. Information and Control, 1983, 59, 108-126.	1.3	1
126	On the maximum edge length in VLSI layouts of complete binary trees. Information Processing Letters, 1986, 23, 19-23.	0.4	1



#	ARTICLE	IF	CITATIONS
127	SimSOA. , 2009, , .		1
128	Efficient barycenter algorithm for drawing hierarchical graphs with minimum edge crossings. , 2011, , .		1
129	Welcome to the 1 <sup>st</sup> international workshop on Software Engineering for the Smart Grid (SE4SG 2012). , 2012, , .		1
130	On the interrelationships between knees and aggregate objective functions. , 2014, , .		1
131	Reference Scenarios for Low Voltage Power Systems. , 2017, , .		1
132	State-of-the-art user interfaces for building operating systems. , 2017, , .		1
133	A Unified Framework for Metaheuristics. Lecture Notes in Computer Science, 2003, , 1568-1569.	1.0	1
134	Time-Scattered Heuristic for the Hardware Implementation of Population-Based ACO. Lecture Notes in Computer Science, 2004, , 250-261.	1.0	1
135	Self-organized Parallel Cooperation for Solving Optimization Problems. Lecture Notes in Computer Science, 2009, , 135-145.	1.0	1
136	BEMCom. , 2022, 2, 20-25.		1
137	Formal Asynchronous Systems Modelling. Fundamenta Informaticae, 2000, 42, 335-389.	0.3	0
138	Assessing the Impact of Inherent SOA System Properties on Complexity. , 2009, , .		0
139	Age based controller stabilization in Evolutionary Robotics. , 2010, , .		0
140	Evolvability in Evolutionary Robotics: Evolving the Genotype-Phenotype Mapping. , 2010, , .		0
141	Introducing the Simulation Plugin Interface and the EAS Framework with comparison to two state-of-the-art agent simulation frameworks. , 2012, , .		0
142	Evolutionary algorithm for optimal anchor node placement to localize devices in a mobile ad hoc network during building evacuation. , 2013, , .		0
143	Smart Energy Systems. IT - Information Technology, 2013, 55, 43-44.	0.6	0
144	Self-organised swarm display. International Journal of Swarm Intelligence, 2014, 1, 246.	0.2	0

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145	Stigmergy-Based Scheduling of Flexible Loads. Lecture Notes in Computer Science, 2016, , 475-490.	1.0	0
146	Outlining Ensemble K-Nearest Neighbors Approach for Low-Voltage Power Demand Forecasting. , 2017, , .		0
147	Generation of Time-of-Use Tariffs for Demand Side Management using Artificial Neural Networks. , 2018, , .		0
148	Collaborating and Learning Predators on a Pursuit Scenario. International Federation for Information Processing, 2010, , 290-301.	0.4	0
149	The JoSchKa System: Organic Job Distribution in Heterogeneous and Unreliable Environments. Lecture Notes in Computer Science, 2010, , 73-86.	1.0	0
150	Self-organized Invasive Parallel Optimization with Self-repairing Mechanism. PARS Parallel-Algorithmen -Rechnerstrukturen Und -Systemsoftware, 2011, 28, 90-99.	0.2	0
151	Design of Gate Array Circuits Using Evolutionary Algorithms. , 2008, , 38-50.		0
152	Remarks on Self-organization and Trust in Organic Computing Systems. Lecture Notes in Computer Science, 2007, , 2-2.	1.0	0