

# Gerhard P Hancke

## List of Publications by Year in descending order

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133  
papers

11,072  
citations

87888

38  
h-index

58581

82  
g-index

134  
all docs

134  
docs citations

134  
times ranked

10641  
citing authors

#	ARTICLE	IF	CITATIONS
1	Resilient Optimal Defensive Strategy of Micro-Grids System via Distributed Deep Reinforcement Learning Approach Against FDI Attack. IEEE Transactions on Neural Networks and Learning Systems, 2024, 35, 598-608.	11.3	8
2	A Three-Stage Optimal Operation Strategy of Interconnected Microgrids With Rule-Based Deep Deterministic Policy Gradient Algorithm. IEEE Transactions on Neural Networks and Learning Systems, 2024, 35, 1773-1784.	11.3	4
3	Resilient Optimal Defensive Strategy of TSK Fuzzy-Model-Based Microgridsâ€™ System via a Novel Reinforcement Learning Approach. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 1921-1931.	11.3	10
4	Two-Layered Hierarchical Optimization Strategy With Distributed Potential Game for Interconnected Hybrid Energy Systems. IEEE Transactions on Cybernetics, 2023, 53, 5436-5447.	9.5	4
5	Static and Dynamic Event-Triggered Mechanisms for Distributed Secondary Control of Inverters in Low-Voltage Islanded Microgrids. IEEE Transactions on Cybernetics, 2022, 52, 6925-6938.	9.5	7
6	Two-Step Wind Power Prediction Approach With Improved Complementary Ensemble Empirical Mode Decomposition and Reinforcement Learning. IEEE Systems Journal, 2022, 16, 2545-2555.	4.6	11
7	SafePath: Exploiting Ubiquitous Smartphones to Avoid Vehicleâ€™Pedestrian Collision. IEEE Internet of Things Journal, 2022, 9, 6763-6777.	8.7	2
8	Interference Avoidance Resource Allocation for D2D-Enabled 5G Narrowband Internet of Things. IEEE Internet of Things Journal, 2022, 9, 22752-22764.	8.7	6
9	Enabling Efficient Model-Free Control of Large-Scale Canals by Exploiting Domain Knowledge. IEEE Transactions on Industrial Electronics, 2021, 68, 8730-8742.	7.9	3
10	Software-Defined Power Grids: A Survey on Opportunities and Taxonomy for Microgrids. IEEE Access, 2021, 9, 98973-98991.	4.2	5
11	SurveilNet: A Lightweight Anomaly Detection System for Cooperative IoT Surveillance Networks. IEEE Sensors Journal, 2021, 21, 25293-25306.	4.7	7
12	Distributed Control of Multi-Functional Grid-Tied Inverters for Power Quality Improvement. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 918-928.	5.4	18
13	Smart Microgrid Energy Market: Evaluating Distributed Ledger Technologies for Remote and Constrained Microgrid Deployments. Electronics (Switzerland), 2021, 10, 714.	3.1	10
14	Towards achieving efficient MAC protocols for WBAN-enabled IoT technology: a review. Eurasip Journal on Wireless Communications and Networking, 2021, 2021, .	2.4	22
15	Wireless Positioning in Underground Mines: Challenges and Recent Advances. IEEE Industrial Electronics Magazine, 2021, 15, 39-48.	2.6	14
16	SDNMMâ€™A Generic SDN-Based Modular Management System for Wireless Sensor Networks. IEEE Systems Journal, 2020, 14, 2347-2357.	4.6	10
17	Two-Stage Optimal Operation Strategy of Isolated Microgrid With TSK Fuzzy Identification of Supply Security. IEEE Transactions on Industrial Informatics, 2020, 16, 3731-3743.	11.3	9
18	Cognitive Radio in Low Power Wide Area Network for IoT Applications: Recent Approaches, Benefits and Challenges. IEEE Transactions on Industrial Informatics, 2020, 16, 7489-7498.	11.3	21

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19	IoT in the Wake of COVID-19: A Survey on Contributions, Challenges and Evolution. IEEE Access, 2020, 8, 186821-186839.	4.2	126
20	Building Upon NB-IoT Networks: A Roadmap Towards 5G New Radio Networks. IEEE Access, 2020, 8, 188641-188672.	4.2	28
21	A Survey on Adaptive Data Rate Optimization in LoRaWAN: Recent Solutions and Major Challenges. Sensors, 2020, 20, 5044.	3.8	101
22	Ranging Error Mitigation for Through-the-Wall Non-Line-of-Sight Conditions. IEEE Transactions on Industrial Informatics, 2020, 16, 6903-6911.	11.3	42
23	A Survey on the Viability of Confirmed Traffic in a LoRaWAN. IEEE Access, 2020, 8, 9296-9311.	4.2	45
24	Artificial Intelligence Techniques for Cognitive Sensing in Future IoT: State-of-the-Art, Potentials, and Challenges. Journal of Sensor and Actuator Networks, 2020, 9, 21.	3.9	28
25	Sleep Scheduling for Unbalanced Energy Harvesting in Industrial Wireless Sensor Networks. IEEE Communications Magazine, 2019, 57, 108-115.	6.1	32
26	Attack detection in water distribution systems using machine learning. Human-centric Computing and Information Sciences, 2019, 9, .	6.1	47
27	An Effective Spectrum Handoff Based on Reinforcement Learning for Target Channel Selection in the Industrial Internet of Things. Sensors, 2019, 19, 1395.	3.8	17
28	Exploring Control-Message Quenching in SDN-based Management of 6LoWPANs. , 2019, , .		8
29	A Survey on LPWAN Technologies in WBAN for Remote Health-Care Monitoring. Sensors, 2019, 19, 5268.	3.8	51
30	Denial of Service Defence for Resource Availability in Wireless Sensor Networks. IEEE Access, 2018, 6, 6975-7004.	4.2	94
31	A Survey on 5G Networks for the Internet of Things: Communication Technologies and Challenges. IEEE Access, 2018, 6, 3619-3647.	4.2	920
32	Guest Editorial Fog Computing for Industrial Applications. IEEE Transactions on Industrial Informatics, 2018, 14, 4481-4486.	11.3	5
33	Security and Privacy for the Industrial Internet of Things: An Overview of Approaches to Safeguarding Endpoints. IEEE Signal Processing Magazine, 2018, 35, 76-87.	5.6	53
34	A Survey of Anomaly Detection in Industrial Wireless Sensor Networks with Critical Water System Infrastructure as a Case Study. Sensors, 2018, 18, 2491.	3.8	100
35	A Statistical Approach to Detect Jamming Attacks in Wireless Sensor Networks. Sensors, 2018, 18, 1691.	3.8	94
36	Wireless Capacitive-Based ECG Sensing for Feature Extraction and Mobile Health Monitoring. IEEE Sensors Journal, 2018, 18, 6023-6032.	4.7	50

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37	Localised information fusion techniques for location discovery in wireless sensor networks. International Journal of Sensor Networks, 2018, 26, 12.	0.4	47
38	Analysis of Energy-Efficient Connected Target Coverage Algorithms for Industrial Wireless Sensor Networks. IEEE Transactions on Industrial Informatics, 2017, 13, 135-143.	11.3	185
39	Simplified performance estimation of ISM-band, OFDM-based WSNs according to the sensitivity/SINAD parameters. Journal of Applied Research and Technology, 2017, 15, 1-13.	0.9	3
40	A Survey on Software-Defined Wireless Sensor Networks: Challenges and Design Requirements. IEEE Access, 2017, 5, 1872-1899.	4.2	360
41	A survey of cognitive radio handoff schemes, challenges and issues for industrial wireless sensor networks (CR-IWSN). Journal of Network and Computer Applications, 2017, 97, 140-156.	9.1	32
42	Towards a distributed control system for software defined Wireless Sensor Networks. , 2017, , .		28
43	Software Defined Networking for Improved Wireless Sensor Network Management: A Survey. Sensors, 2017, 17, 1031.	3.8	159
44	A Survey on Urban Traffic Management System Using Wireless Sensor Networks. Sensors, 2016, 16, 157.	3.8	256
45	Traffic Management for Emergency Vehicle Priority Based on Visual Sensing. Sensors, 2016, 16, 1892.	3.8	89
46	Towards non-line-of-sight ranging error mitigation in industrial wireless sensor networks. , 2016, , .		8
47	Guest Editorial Healthcare Systems and Technologies. IEEE Transactions on Industrial Informatics, 2016, 12, 2266-2268.	11.3	2
48	A smart helmet for air quality and hazardous event detection for the mining industry. , 2016, , .		39
49	IR-UWB-Based Non-Line-of-Sight Identification in Harsh Environments: Principles and Challenges. IEEE Transactions on Industrial Informatics, 2016, 12, 1188-1195.	11.3	111
50	A Web-Based Office Climate Control System Using Wireless Sensors. IEEE Sensors Journal, 2016, 16, 6104-6113.	4.7	17
51	A smartphone-based mobile incident response system for indoor and outdoor scenarios. , 2016, , .		0
52	Sensor network for DC distribution for energy-efficient data centers and future buildings. , 2016, , .		1
53	An Energy-Balanced Heuristic for Mobile Sink Scheduling in Hybrid WSNs. IEEE Transactions on Industrial Informatics, 2016, 12, 28-40.	11.3	89
54	Wireless sensor networks for safety protocols in the industry. , 2015, , .		0

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55	A smart grid electricity hub. , 2015, , .		0
56	Design of a smart sprinkler system. , 2015, , .		5
57	Design of a water management system. , 2015, , .		9
58	IEEE Access Special Section Editorial: Industrial Sensor Networks With Advanced Data Management: Design And Security. IEEE Access, 2015, 3, 2700-2703.	4.2	2
59	A service-oriented architecture for wireless video sensor networks: Opportunities and challenges. , 2015, , .		0
60	A wireless smart parking system. , 2015, , .		23
61	Self-contained track and trace using GPRS. , 2015, , .		1
62	Autonomous pedestrian detection. , 2015, , .		4
63	Design of a smart geysers controller unit. , 2015, , .		4
64	Open Hardware: A Role to Play in Wireless Sensor Networks?. Sensors, 2015, 15, 6818-6844.	3.8	73
65	Using Cognitive Radio for Interference-Resistant Industrial Wireless Sensor Networks: An Overview. IEEE Transactions on Industrial Informatics, 2015, 11, 1466-1481.	11.3	127
66	Experimental Link Quality Characterization of Wireless Sensor Networks for Underground Monitoring. IEEE Transactions on Industrial Informatics, 2015, 11, 1099-1110.	11.3	111
67	Design of a wireless heliostat system. , 2015, , .		6
68	Experimental study of UWB-based high precision localization for industrial applications. , 2014, , .		65
69	Development of a robust active infrared-based eye tracker. IET Computer Vision, 2014, 8, 523-534.	2.0	4
70	A hub-odometer sensor network for road user charges. , 2014, , .		0
71	Positioning infrastructure for industrial automation systems based on UWB wireless communication. , 2014, , .		12
72	Guest Editorial Special Section on Industrial Wireless Sensor Networks. IEEE Transactions on Industrial Informatics, 2014, 10, 762-765.	11.3	19

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73	The Generic Design of a High-Traffic Advanced Metering Infrastructure Using ZigBee. IEEE Transactions on Industrial Informatics, 2014, 10, 836-844.	11.3	75
74	The feasibility of using resonant inductive power transfer to recharge wireless sensor network nodes. , 2014, , .		3
75	Energy Efficient Environment Monitoring System Based on the IEEE 802.15.4 Standard for Low Cost Requirements. IEEE Sensors Journal, 2014, 14, 2557-2566.	4.7	91
76	An Energy-Efficient Smart Comfort Sensing System Based on the IEEE 1451 Standard for Green Buildings. IEEE Sensors Journal, 2014, 14, 4245-4252.	4.7	86
77	Environmental Monitoring Systems: A Review. IEEE Sensors Journal, 2013, 13, 1329-1339.	4.7	126
78	On link quality aware routing for industrial wireless sensor networks. , 2013, , .		4
79	Guest Editorial Special Section on Information Technologies in Smart Grids. IEEE Transactions on Industrial Informatics, 2013, 9, 1380-1383.	11.3	15
80	A Survey on Smart Grid Potential Applications and Communication Requirements. IEEE Transactions on Industrial Informatics, 2013, 9, 28-42.	11.3	920
81	The Role of Advanced Sensing in Smart Cities. Sensors, 2013, 13, 393-425.	3.8	447
82	Design of a low cost video monitor store and forward device. , 2012, , .		5
83	Wireless sensor network for building evacuation. , 2012, , .		4
84	A Distributed Topology Control Technique for Low Interference and Energy Efficiency in Wireless Sensor Networks. IEEE Transactions on Industrial Informatics, 2012, 8, 11-19.	11.3	110
85	Industrial wireless sensor networks: A selection of challenging applications. , 2012, , .		12
86	Energy harvesting for Wireless Sensors from electromagnetic fields around overhead power lines. , 2012, , .		26
87	Smart Grid and Smart Homes: Key Players and Pilot Projects. IEEE Industrial Electronics Magazine, 2012, 6, 18-34.	2.6	161
88	Design of a controller for a universal input/output port. , 2012, , .		6
89	A wind energy harvester for low power wireless sensor networks. , 2012, , .		31
90	Capacity and Outage Analysis of MIMO and Cooperative Communication Systems in Underground Tunnels. IEEE Transactions on Wireless Communications, 2011, 10, 3793-3803.	9.2	23

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91	Dynamic Connectivity in Wireless Underground Sensor Networks. IEEE Transactions on Wireless Communications, 2011, 10, 4334-4344.	9.2	73
92	Eye detection for a real-time vehicle driver fatigue monitoring system. , 2011, , .		45
93	A survey of wireless sensor network applications from a power utility's distribution perspective. , 2011, , .		28
94	Smart Grid Technologies: Communication Technologies and Standards. IEEE Transactions on Industrial Informatics, 2011, 7, 529-539.	11.3	2,067
95	A survey of Wireless Sensor Network testbeds. , 2011, , .		23
96	An investigation of Bluetooth merge with Ultra Wideband. Ad Hoc Networks, 2011, 9, 852-863.	5.5	3
97	Practical eavesdropping and skimming attacks on high-frequency RFID tokens. Journal of Computer Security, 2011, 19, 259-288.	0.8	43
98	Opportunities and Challenges of Wireless Sensor Networks in Smart Grid. IEEE Transactions on Industrial Electronics, 2010, 57, 3557-3564.	7.9	1,069
99	New content behind the concept intelligent engineering. , 2010, , .		1
100	Energy Efficient Message Routing in a Small World Wireless Sensor Network. Lecture Notes in Electrical Engineering, 2010, , 183-192.	0.4	0
101	A contribution to solution for the problem of human controlled object model definition. , 2009, , .		0
102	Actor Coordination in Wireless Sensor-Actor Networks. , 2009, , .		3
103	Comparison of two routing metrics in OLSR on a grid based mesh network. Ad Hoc Networks, 2009, 7, 374-387.	5.5	99
104	Industrial Wireless Sensor Networks: Challenges, Design Principles, and Technical Approaches. IEEE Transactions on Industrial Electronics, 2009, 56, 4258-4265.	7.9	1,282
105	Driver fatigue detection : A survey. , 2009, , .		25
106	Perimeter Echo Algorithm for network localization. , 2009, , .		1
107	Evaluating and optimising accelerometer-based gesture recognition techniques for mobile devices. , 2009, , .		21
108	On the way towards model for background of decisions on engineering objects in PLM. , 2009, , .		1

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109	Modelling a Wireless Sensor Network as a Small World Network. , 2009, , .		5
110	An XML Model for Use Across Heterogeneous Clientâ€“Server Applications. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 2128-2135.	4.7	8
111	A Cross-Layer Approach Towards Efficiency Optimization of Wireless Sensor and Actor Networks. , 2008, , .		1
112	An Investigation of Bluetooth Mergence with Ultra Wideband. , 2008, , .		1
113	Credibility of Routing Information in Wireless Sensor Networks. Industrial Informatics, 2009 INDIN 2009 7th IEEE International Conference on, 2007, , .	0.0	0
114	Welcome Message from the Conference Chairs. , 2007, , .		1
115	Content Orientation in Integrated Product Modeling. , 2007, , .		2
116	Feasibility of using stochastic adaptive congestion control in computer networks. , 2007, , .		1
117	A Secure Web Service for Electricity Prepayment Vending in South Africa: A Case Study and Industry Specification. , 2007, , .		5
118	A New Model for Autonomous, Networked Control Systems. IEEE Transactions on Industrial Informatics, 2007, 3, 21-32.	11.3	49
119	Comparing wireless sensor network routing protocols. , 2007, , .		3
120	Secure Internet Access to Gateway Using Secure Socket Layer. IEEE Transactions on Instrumentation and Measurement, 2006, 55, 793-800.	4.7	8
121	Design of an Access Control Module for an Instrumentation Gateway. IEEE Transactions on Instrumentation and Measurement, 2006, 55, 140-149.	4.7	1
122	Ultrawideband as an Industrial Wireless Solution. IEEE Pervasive Computing, 2006, 5, 78-85.	1.3	29
123	A modal analysis technique for the on-line particle size measurement of pneumatically conveyed pulverized coal. IEEE Transactions on Instrumentation and Measurement, 1998, 47, 114-122.	4.7	27
124	Continuous measurement of moisture in nonconducting materials. IEEE Transactions on Instrumentation and Measurement, 1992, 41, 1023-1026.	4.7	6
125	The measurement of the relative density of homogeneous fluids by means of an optical technique. IEEE Transactions on Instrumentation and Measurement, 1992, 41, 1053-1056.	4.7	4
126	A fiber-optic density sensor for monitoring the state-of-charge of a lead acid battery. IEEE Transactions on Instrumentation and Measurement, 1990, 39, 247-250.	4.7	18



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127	The optimal frequency estimation of a noisy sinusoidal signal. IEEE Transactions on Instrumentation and Measurement, 1990, 39, 843-846.	4.7	30
128	The microprocessor measurement of low values of rotational speed and acceleration. IEEE Transactions on Instrumentation and Measurement, 1990, 39, 1014-1017.	4.7	24
129	Secure Internet access to gateway using secure socket layer. , 0, , .		3
130	Design of an access control module for an instrumentation gateway. , 0, , .		0
131	An XML model for use across heterogeneous client-server applications. , 0, , .		0
132	Intelligent computing for the management of changes in industrial engineering modeling processes. , 0, , .		12
133	Wireless sensor networks for smart grid: research challenges and potential applications. , 0, , 265-278.		1