Seppo A Sierla

List of Publications by Citations

72 papers	**639** citations
12 h-index	**21** g-index
81 ext. papers	**901** ext. citations
4.8 avg, IF	**4.38** L-index

#	Paper	IF	Citations
72	Adapting an agile manufacturing concept to the reference architecture model industry 4.0: A survey and case study. *Journal of Industrial Information Integration*, **2019**, 15, 147-160	7	69
71	Early integration of safety to the mechatronic system design process by the functional failure identification and propagation framework. *Mechatronics*, **2012**, 22, 137-151	3	51
70	Automatic assembly planning based on digital product descriptions. *Computers in Industry*, **2018**, 97, 34-46	11.6	49
69	Common cause failure analysis of cyber‑physical systems situated in constructed environments. *Research in Engineering Design - Theory, Applications, and Concurrent Engineering*, **2013**, 24, 375-394	3.5	25
68	Automated Fault Location and Isolation in Distribution Grids With Distributed Control and Unreliable Communication. *IEEE Transactions on Industrial Electronics*, **2015**, 62, 2612-2619	8.9	25
67	Automatic Generation of a Simulation-Based Digital Twin of an Industrial Process Plant **2018**,		25
66	A Migration Path to IEC 61499 for the Batch Process Industry **2007**,		21
65	Internet of Energy Approach for Sustainable Use of Electric Vehicles as Energy Storage of Prosumer Buildings. *Energies*, **2018**, 11, 2165	3.1	18
64	An overview of machine learning applications for smart buildings. *Sustainable Cities and Society*, **2022**, 76, 103445	10.1	17
63	. *IEEE Transactions on Industrial Informatics*, **2019**, 15, 677-688	11.9	14
62	Automatic Generation of a High-Fidelity Dynamic Thermal-Hydraulic Process Simulation Model From a 3D Plant Model. *IEEE Access*, **2018**, 6, 45217-45232	3.5	14
61	Tutorial: Road Lighting for Efficient and Safe Traffic Environments. *LEUKOS - Journal of Illuminating Engineering Society of North America*, **2017**, 13, 223-241	3.5	12
60	. *IEEE Industrial Electronics Magazine*, **2020**, 14, 57-72	6.2	12
59	Assessing the industrial applicability and adoption potential of the AUKOTON model driven control application engineering approach **2010**,		12
58	Simulation of Interactions and Emergent Failure Behavior During Complex System Design. *Journal of Computing and Information Science in Engineering*, **2012**, 12,	2.4	12
57	Exploiting Artificial Neural Networks for the Prediction of Ancillary Energy Market Prices. *Energies*, **2018**, 11, 1906	3.1	12
56	Generating an Object Oriented IEC 61131-3 software product line architecture from SysML **2013**,		11

55	Industrial evaluation of functional Model-Based Testing for process control applications using CAEX **2013**,		10
54	Professional designers╳adaptations of IEC 61499 to their individual work practices **2006**,		10
53	Towards Product Centric Manufacturing: From Digital Twins to Product Assembly **2019**,		10
52	Applying graph matching techniques to enhance reuse of plant design information. *Computers in Industry*, **2019**, 107, 81-98	11.6	9
51	An Integrated Implementation Methodology of a Lifecycle-Wide Tracking Simulation Architecture. *IEEE Access*, **2018**, 6, 15391-15407	3.5	9
50	Energy efficient traffic-based street lighting automation **2014**,		9
49	Smart indoor lighting control: Power, illuminance, and colour quality **2014**,		8
48	Distributed Problem Solving in Software Development: The Case of an Automation Project. *Social Studies of Science*, **2008**, 38, 133-158	2.4	8
47	An Artificial Intelligence framework for bidding optimization with uncertainty in multiple frequency reserve markets. *Applied Energy*, **2020**, 280, 115918	10.7	8
46	. *IEEE Access*, **2017**, 5, 26591-26603	3.5	7
45	**2015**,		7
44	Object oriented extensions of IEC 61131╴ as an enabling technology of software product lines **2011**,		7
43	Process Control with IEC 61499: Designers╳Choices at Different Levels of the Application Hierarchy **2006**,		7
42	Capturing Interactions and Emergent Failure Behavior in Complex Engineered Systems at Multiple Scales **2011**,		7
41	A Virtual Power Plant Solution for Aggregating Photovoltaic Systems and Other Distributed Energy Resources for Northern European Primary Frequency Reserves. *Energies*, **2021**, 14, 1242	3.1	7
40	Towards Semi-Automatic Generation of a Steady State Digital Twin of a Brownfield Process Plant. *Applied Sciences (Switzerland)*, **2020**, 10, 6959	2.6	6
39	Safety analysis of mechatronic product lines. *Mechatronics*, **2014**, 24, 231-240	3	6
38	Towards an aggregator that exploits big data to bid on frequency containment reserve market **2017**,		6

37	Integrating 2D and 3D Digital Plant Information Towards Automatic Generation of Digital Twins **2020**,		6
36	Vehicle and pedestrian aware street lighting automation **2015**,		5
35	**2014**,		5
34	Adapting Keyword driven test automation framework to IEC 61131-3 industrial control applications using PLCopen XML **2014**,		5
33	Educational approaches for the industrial acceptance of IEC 61499 **2007**,		5
32	An industrial evaluation of SysML: The case of a nuclear automation modernization project **2013**,		4
31	Co-simulation of a dynamic process simulator and an event-based control system: Case district heating system **2014**,		4
30	Generating and validating product instances in IEC 61131 B from feature models **2011**,		4
29	Using Fault Propagation Analyses for Early Elimination of Unreliable Design Alternatives of Complex Cyber-Physical Systems **2012**,		4
28	An IEC 61499 Based Approach for Distributed Batch Process Control. *Industrial Informatics, 2009 INDIN 2009 7th IEEE International Conference on*, **2007**,		4
27	Roadmap to semi-automatic generation of digital twins for brownfield process plants. *Journal of Industrial Information Integration*, **2021**, 100282	7	4
26	A taxonomy of machine learning applications for virtual power plants and home/building energy management systems. *Automation in Construction*, **2022**, 136, 104174	9.6	4
25	Security risk analysis for smart grid automation **2014**,		3
24	Capturing Deviations From Design Intent in Building Simulation Models for Risk Assessment. *Journal of Computing and Information Science in Engineering*, **2015**, 15,	2.4	3
23	Reducing redesign of safety critical control systems by early risk assessment **2010**,		3
22	Challenges in industrial adoption of model-driven technologies in process control application design **2011**,		3
21	Real-time middleware for the requirements of distributed process control		3
20	Requirement verification in simulation-based automation testing **2016**,		3

#	Title	IF	Cit.
19	Solar Irradiance Nowcasting for Virtual Power Plants Using Multimodal Long Short-Term Memory Networks. *Frontiers in Energy Research*, **2021**, 9,	3.8	3
18	Generating an industrial process graph from 3D pipe routing information **2020**,		2
17	Design to automation continuum for industrial processes: ISO 15926 ⫽EC 61131 versus an industrial case **2019**,		2
16	A framework for runtime verification of industrial process control systems **2017**,		2
15	A Simulation Based Approach to Automate Event Tree Generation for Early Complex System Designs **2013**,		2
14	Early phase fault propagation analysis of safety critical factory automation systems **2012**,		2
13	Robust Multi-Step Predictor for Electricity Markets with Real-Time Pricing. *Energies*, **2021**, 14, 4378	3.1	2
12	An auction-based smart district heating grid **2015**,		1
11	A SysML profile supporting change orders in model driven engineering **2015**,		1
10	Security impact assessment of industrial automation systems using genetic algorithm and simulation **2014**,		1
9	Hybrid Digital Twin for process industry using Apros simulation environment **2021**,		1
8	Service-based Architecture with Product-centric Control in a Production Island-based Agile Factory **2019**,		1
7	A Simulation Environment for Training a Reinforcement Learning Agent Trading a Battery Storage. *Energies*, **2021**, 14, 5587	3.1	1
6	A Review of Reinforcement Learning Applications to Control of Heating, Ventilation and Air Conditioning Systems. *Energies*, **2022**, 15, 3526	3.1	1
5	Exploiting Battery Storages With Reinforcement Learning: A Review for Energy Professionals. *IEEE Access*, **2022**, 10, 54484-54506	3.5	1
4	Validating the Real-Time Performance of Distributed Energy Resources Participating on Primary Frequency Reserves. *Energies*, **2021**, 14, 6914	3.1	0
3	Whitening CNN-Based Rotor System Fault Diagnosis Model Features. *Applied Sciences (Switzerland)*, **2022**, 12, 4411	2.6	0
2	An Infrastructure for Open Service Architectures in MMM Industries. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2004**, 37, 275-280		

1   A methodology for generating a digital twin for process industry: a case study of a fiber processing pilot plant. *IEEE Access*, **2022**, 1-1   3.5

1   A methodology for generating a digital twin for process industry: a case study of a fiber processing pilot plant. *IEEE Access*, **2022**, 1-1   3.5