Frank Schultmann

List of Publications by Year
in descending order

113 papers	4,680 citations	136740 32 h-index	106150 65 g-index
121 all docs	121 docs citations	121 times ranked	4619 citing authors

#	Article	IF	Citations
1	Building Information Modeling (BIM) for existing buildings â€" Literature review and future needs. Automation in Construction, 2014, 38, 109-127.	4.8	1,374
2	Sustainable supplier management â€“ a review of models supporting sustainable supplier selection, monitoring and development. International Journal of Production Research, 2016, 54, 1412-1442.	4.9	299
3	Modeling reverse logistic tasks within closed-loop supply chains: An example from the automotive industry. European Journal of Operational Research, 2006, 171, 1033-1050.	3.5	246
4	Comprehensive techno-economic assessment of dimethyl ether (DME) synthesis and Fischerâ€"Tropsch synthesis as alternative process steps within biomass-to-liquid production. Fuel Processing Technology, 2013, 106, 577-586.	3.7	137
5	Techno-economic assessment of gasification as a process step within biomass-to-liquid (BtL) fuel and chemicals production. Fuel Processing Technology, 2011, 92, 2169-2184.	3.7	111
6	Closed-Loop Supply Chains for Spent Batteries. Interfaces, 2003, 33, 57-71.	1.6	109
7	A high-resolution determination of the technical potential for residential-roof-mounted photovoltaic systems in Germany. Solar Energy, 2014, 105, 715-731.	2.9	105
8	Assessing social risks of global supply chains: A quantitative analytical approach and its application to supplier selection in the German automotive industry. Journal of Cleaner Production, 2017, 149, 96-109.	4.6	93
9	Matching construction and demolition waste supply to recycling demand: a regional management chain model. Building Research and Information, 2011, 39, 333-351.	2.0	89
10	Decision maps: A framework for multi-criteria decision support under severe uncertainty. Decision Support Systems, 2011, 52, 108-118.	3.5	86
11	A method for predicting the economic potential of (building-integrated) photovoltaics in urban areas based on hourly Radiance simulations. Solar Energy, 2015, 116, 357-370.	2.9	83
12	Public acceptance of renewable energies and energy autonomy: A comparative study in the French, German and Swiss Upper Rhine region. Energy Policy, 2019, 126, 315-332.	4.2	78
13	Design and planning of a closed-loop supply chain with three way recovery and buy-back offer. Journal of Cleaner Production, 2016, 135, 604-619.	4.6	74
14	Combined scheduling and capacity planning of electricity-based ammonia production to integrate renewable energies. European Journal of Operational Research, 2015, 241, 851-862.	3.5	73
15	Technoâ€economic assessment and comparison of different plastic recycling pathways: A German case study. Journal of Industrial Ecology, 2021, 25, 1318-1337.	2.8	71
16	Techno-Economic Analysis of Fast Pyrolysis as a Process Step Within Biomass-to-Liquid Fuel Production. Waste and Biomass Valorization, 2010, 1, 415-430.	1.8	64
17	Assessing the integration of torrefaction into wood pellet production. Journal of Cleaner Production, 2014, 78, 216-225.	4.6	64
18	Energy-oriented deconstruction and recovery planning. Building Research and Information, 2007, 35, 602-615.	2.0	62

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19	Deconstruction project planning of existing buildings based on automated acquisition and reconstruction of building information. Automation in Construction, 2018, 91, 226-245.	4.8	51
20	Industrial disassembling as a key enabler of circular economy solutions for obsolete electric vehicle battery systems. Resources, Conservation and Recycling, 2021, 174, 105735.	5.3	50
21	Tailoring Competitive Advantages Derived from Innovation to the Needs of Construction Firms. Journal of Construction Engineering and Management - ASCE, 2010, 136, 568-580.	2.0	49
22	Intercompany Energy Integration. Journal of Industrial Ecology, 2012, 16, 689-698.	2.8	48
23	Adapting rail and road networks to weather extremes: case studies for southern Germany and Austria. Natural Hazards, 2014, 72, 63-85.	1.6	46
24	A Material Flowâ€based Approach to Enhance Resource Efficiency in Production and Recycling Networks. Journal of Industrial Ecology, 2013, 17, 5-19.	2.8	45
25	Deconstruction, demolition and destruction. Building Research and Information, 2011, 39, 327-332.	2.0	44
26	Livestock manure and crop residue for energy generation: Macro-assessment at a national scale. Renewable and Sustainable Energy Reviews, 2014, 38, 537-550.	8.2	42
27	Trapezoidal fuzzy DEMATEL method to analyze and correct for relations between variables in a composite indicator for disaster resilience. OR Spectrum, 2012, 34, 971-995.	2.1	41
28	Local Acceptance of Biogas Plants: A Comparative Study in the Trinational Upper Rhine Region. Waste and Biomass Valorization, 2017, 8, 2393-2412.	1.8	40
29	A decision support methodology for a disaster-caused business continuity management. Decision Support Systems, 2019, 118, 10-20.	3.5	40
30	A composite indicator model to assess natural disaster risks in industry on a spatial level. Journal of Risk Research, 2013, 16, 1077-1099.	1.4	39
31	Flowsheeting-based simulation of recycling concepts in the metal industry. Journal of Cleaner Production, 2004, 12, 737-751.	4.6	37
32	Municipal solid waste and production of substitute natural gas and electricity as energy alternatives. Applied Thermal Engineering, 2013, 51, 1107-1115.	3.0	36
33	Public-private collaborations in emergency logistics: A framework based on logistical and game-theoretical concepts. Safety Science, 2021, 141, 105301.	2.6	33
34	Electricity and substitute natural gas generation from the conversion of wastewater treatment plant sludge. Applied Energy, 2014, 113, 404-413.	5.1	31
35	The future of nuclear decommissioning â€“ A worldwide market potential study. Energy Policy, 2019, 124, 226-261.	4.2	31
36	Freight transportation planning considering carbon emissions and in-transit holding costs: a capacitated multi-commodity network flow model. EURO Journal on Transportation and Logistics, 2016, 5, 123-160.	1.3	29

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37	System Dynamics Modelling Process in Water Sector: a Review of Research Literature. Systems Research and Behavioral Science, 2018, 35, 776-790.	0.9	29
38	Simulating the service lifetimes and storage phases of consumer electronics in Europe with a cascade stock and flow model. Journal of Cleaner Production, 2019, 213, 1313-1321.	4.6	27
39	Integrating entropy theory and cospanning tree technique for redundancy analysis of water distribution networks. Reliability Engineering and System Safety, 2018, 176, 102-112.	5.1	25
40	An Approach to Multiâ€Criteria Decision Problems Under Severe Uncertainty. Journal of Multi-Criteria Decision Analysis, 2013, 20, 29-48.	1.0	24
41	Techno-economic assessment of utilization pathways for rice straw: A simulation-optimization approach. Journal of Cleaner Production, 2019, 230, 1329-1343.	4.6	24
42	Scenarioâ€based impact analysis of a power outage on healthcare facilities in Germany. International Journal of Disaster Resilience in the Built Environment, 2011, 2, 222-244.	0.7	23
43	A spatial-temporal vulnerability assessment to support the building of community resilience against power outage impacts. Technological Forecasting and Social Change, 2017, 121, 99-118.	6.2	22
44	Analyzing investment strategies under changing energy and climate policies: an interdisciplinary bottom-up approach regarding German metal industries. Journal of Business Economics, 2017, 87, 5-39.	1.3	20
45	The four Rs performance indicators of water distribution networks. International Journal of Quality and Reliability Management, 2017, 34, 720-732.	1.3	19
46	Managing Knowledge to Promote Sustainability in Australian Transport Infrastructure Projects. Sustainability, 2015, 7, 8132-8150.	1.6	18
47	Entropy of centrality values for topological vulnerability analysis of water distribution networks. Built Environment Project and Asset Management, 2019, 9, 412-425.	0.9	18
48	Review of project planning methods for deconstruction projects of buildings. Built Environment Project and Asset Management, 2017, 7, 212-226.	0.9	16
49	An Integrated Material Flows, Stakeholders and Policies Approach to Identify and Exploit Regional Resource Potentials. Ecological Economics, 2019, 161, 292-320.	2.9	16
50	The link between product service lifetime and GHG emissions: A comparative study for different consumer products. Journal of Industrial Ecology, 2021, 25, 465-478.	2.8	16
51	Environment-oriented project scheduling for the dismantling of buildings. OR Spectrum, 2001, 23, 51-78.	2.1	15
52	Scheduling of deconstruction projects under resource constraints. Construction Management and Economics, 2002, 20, 391-401.	1.8	15
53	Fuzzy approach for production planning and detailed scheduling in paints manufacturing. International Journal of Production Research, 2006, 44, 1589-1612.	4.9	15
54	Biomass Value Chain Design: A Case Study of the Upper Rhine Region. Waste and Biomass Valorization, 2017, 8, 2313-2327.	1.8	15

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55	From the Building Level Energy Performance Assessment to the National Level: How are Uncertainties Handled in Building Stock Models. Procedia Engineering, 2017, 180, 1443-1452.	1.2	14
56	Considering risks in early stage investment planning for emission abatement technologies in large combustion plants. Journal of Cleaner Production, 2017, 142, 133-144.	4.6	14
57	Processing Miscanthus to highâ€value chemicals: A technoâ€economic analysis based on process simulation. GCB Bioenergy, 2022, 14, 447-462.	2.5	14
58	A methodological approach for the economic assessment of best available techniques demonstrated for a case study from the steel industry. International Journal of Life Cycle Assessment, 2001, 6, 19.	2.2	13
59	Analysing the interdependencies between the criteria of sustainable building rating systems. Construction Management and Economics, 2011, 29, 323-328.	1.8	13
60	Linking a farm model and a location optimization model for evaluating energetic and material straw valorization pathwaysâ€"A case study in Badenâ€Wuerttemberg. GCB Bioenergy, 2019, 11, 304-325.	2.5	13
61	Ammoniaksynthese als Beispiel einer stofflichen Nutzung von intermittierend erzeugtem Wasserstoff. Chemie-Ingenieur-Technik, 2014, 86, 649-657.	0.4	12
62	Regional rotor blade waste quantification in Germany until 2040. Resources, Conservation and Recycling, 2021, 172, 105667.	5.3	12
63	Modeling the impact of competing utilization paths on biomass-to-liquid (BtL) supply chains. Applied Energy, 2017, 208, 954-971.	5.1	11
64	Exact reliability evaluation of infrastructure networks using graph theory. Quality and Reliability Engineering International, 2020, 36, 498-510.	1.4	11
65	A Distributed Scenario-Based Decision Support System for Robust Decision-Making in Complex Situations. International Journal of Information Systems for Crisis Response and Management, 2011, 3, 17-35.	0.7	10
66	Project management standards: strategic success factor for projects. International Journal of Management Practice, 2018, 11, 372.	0.1	10
67	A simulation model for assessing the potential of remanufacturing electric vehicle batteries as spare parts. Journal of Cleaner Production, 2022, 363, 132225.	4.6	10
68	Site-specific environmental impact assessment as a basis for supplier selections â€“ exemplary application to aluminum. Journal of Cleaner Production, 2021, 290, 125703.	4.6	9
69	Evaluation strategies for nuclear and radiological emergency and post-accident management. Radioprotection, 2010, 45, S133-S147.	0.5	8
70	Enhancing Robustness in Multi-criteria Decision-Making: A Scenario-Based Approach. , 2010, , .		8
71	Scenario reliability assessment to support decision makers in situations of severe uncertainty. , 2012, , .		8
72	Techno-Economic Analysis of Intermediate Pyrolysis with Solar Drying: A Chilean Case Study. Energies, 2022, 15, 2272.	1.6	8

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73	Dynamic-spatial Vulnerability Assessments: A Methodical Review for Decision Support in Emergency Planning for Power Outages. Procedia Engineering, 2014, 78, 78-87.	1.2	7
74	Risk behaviour and people's attitude towards public authorities â€“ A survey of 2007 UK and 2013 German floods. International Journal of Disaster Risk Reduction, 2020, 49, 101685.	1.8	7
75	Communication blackouts in power outages: Findings from scenario exercises in Germany and France. International Journal of Disaster Risk Reduction, 2020, 46, 101628.	1.8	7
76	Aerial Thermographic Image-Based Assessment of Thermal Bridges Using Representative Classifications and Calculations. Energies, 2021, 14, 7360.	1.6	7
77	Extreme weather events and road and rail transportation in Germany. International Journal of Emergency Management, 2012, 8, 207.	0.2	6
78	Collaborative Emergency Supply Chains for Essential Goods and Services. Urban Book Series, 2018, , 145-168.	0.3	6
79	Assessment of site-specific greenhouse gas emissions of chemical producers: Case studies of propylene and toluene diisocyanate. Journal of Cleaner Production, 2021, 317, 128086.	4.6	6
80	Urban Resource Assessment, Management, and Planning Tools for Land, Ecosystems, Urban Climate, Water, and Materialsâ€”A Review. Sustainability, 2022, 14, 7203.	1.6	6
81	Conception of a Simulation Model for Business Continuity Management Against Food Supply Chain Disruptions. Procedia Engineering, 2015, 107, 146-153.	1.2	5
82	Integrating Spent Productsâ€™ Material into Supply Chains: The Recycling of End-Of-Life Vehicles as an Example. , 2004, , 35-59.		5
83	Challenges in Establishing Cross-Border Resilience. Urban Book Series, 2018, , 429-457.	0.3	4
84	Application of collaborative serious gaming for the elicitation of expert knowledge and towards creating Situation Awareness in the field of infrastructure resilience. International Journal of Disaster Risk Reduction, 2022, 67, 102665.	1.8	4
85	Analysis of financial benefits for energy retrofits of owner-occupied single-family houses in Germany. Building and Environment, 2022, 211, 108722.	3.0	4
86	Potential supply chain cost savings from innovative cold bitumen handling. International Journal of Logistics Research and Applications, 2012, 15, 337-350.	5.6	3
87	A new focus on risk reduction: an ad hoc decision support system for humanitarian relief logistics. Ecosystem Health and Sustainability, 2015, 1, 1-11.	1.5	3
88	CO2-based assessment for sustainable production planning in the metal processing industry. Procedia Manufacturing, 2018, 21, 289-296.	1.9	3
89	Potential Contribution of Secondary Materials to Overall Supply - The Example of the European Cobalt Cycle. Materials Science Forum, 2019, 959, 11-21.	0.3	3
90	On the combination of water emergency wells and mobile treatment systems: a case study of the city of Berlin. Annals of Operations Research, 2022, 319, 259-290.	2.6	3

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91	Were the floods in the UK 2007 and Germany 2013 game-changers?. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190372.	1.6	3
92	Integrating site-specific environmental impact assessment in supplier selection: exemplary application to steel procurement. Journal of Business Economics, 2020, 90, 1409-1457.	1.3	3
93	RÃ¼cklaufmengen und Verwertungswege von Altbatterien aus Elektromobilen in Deutschland. Chemie-Ingenieur-Technik, 2021, 93, 1805.	0.4	3
94	Namaresâ€"A Surface Inventory and Intervention Assessment Model for Urban Resource Management. Sustainability, 2022, 14, 8485.	1.6	3
95	Analyzing energy and resource efficiency measures in the steel and zinc industry combining flowsheet simulation with a linear material and energy flow model. Revue De Metallurgie, 2012, 109, 359-367.	0.3	2
96	A real option application for emission control measures. Journal of Business Economics, 2019, 89, 291-325.	1.3	2
97	Sustainable Deconstruction of Buildings. , 0, , 148-159.		2
98	Industrielles Produktions- und Logistikmanagement. , 2004, , 227-231.		2
99	Deployment and Relocation of Semi-mobile Facilities in a Thermal Power Plant Supply Chain. Operations Research Proceedings: Papers of the Annual Meeting = VortrÃge Der Jahrestagung / DGOR, 2018, , 185-190.	0.1	2
100	Integrating Topological and Hydraulic Attributes for Robustness Analysis of Water Distribution Networks. International Journal of Industrial Engineering and Operations Management, 2019, 01, 1-11.	0.6	2
101	On the Integration of Diverging Material Flows into Resource-constrained Project Scheduling. European Journal of Operational Research, 2022, , .	3.5	2
102	A survey of private landlords in Karlsruhe and their perception of deep energy retrofit. IOP Conference Series: Earth and Environmental Science, 2019, 323, 012165.	0.2	1
103	Adversarial risks in the lab â€“ An experimental study of framing-effects in attacker-defender games. Safety Science, 2019, 120, 551-560.	2.6	1
104	Stakeholder-specific assessment of environmental, economic and social effects of resource-efficiency measures in urban districts - first results. IOP Conference Series: Earth and Environmental Science, 2020, 588, 052036.	0.2	1
105	An Actor-Oriented Approach to Evaluate Climate Policies with Regard to Resource Intensive Industries. Operations Research Proceedings: Papers of the Annual Meeting = VortrÃge Der Jahrestagung / DGOR, 2016, , 59-64.	0.1	1
106	Demontageplanung und -steuerung mit Enterprise-Resource- und Advanced-Planning-Systemen. , 2004, , 315-323.		1
107	Borderland resilience, willingness to help and trustâ€"An empirical study of the French-German border area. Journal of Behavioral and Experimental Economics, 2022, 99, 101898.	0.5	1
108	On the effects of authoritiesâ€™ disaster interventions in Public-Private Emergency Collaborations. International Journal of Disaster Risk Reduction, 2022, 79, 103140.	1.8	1

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109	Economic Assessment of the Use of Renewable Fuels in a Passenger Car. , 2018, , .		0
110	Comparison of Heuristics Towards Approaching a Scheduling and Capacity Planning MINLP for Hydrogen Storage in Chemical Substances. Operations Research Proceedings: Papers of the Annual Meeting = VortrÃge Der Jahrestagung / DGOR, 2014, , 413-419.	0.1	0
111	Understanding Resilience: A Spatio-temporal Vulnerability Assessment of a Population Affected by a Sudden Lack of Food. Profiles in Operations Research, 2016, , 257-280.	0.3	0
112	Comparing the Perception of Privacy for Medical Devices and Devices With Medical Functionality. International Journal of Privacy and Health Information Management, 2020, 8, 52-69.	0.2	0
113	The impact of secondary materialsâ€™ quality on assessing plastic recycling technologies. E3S Web of Conferences, 2022, 349, 05001.	0.2	0