Lorenz M Hilty

List of Publications by Year
in descending order

83 papers	3,158 citations	126708 33 h-index	161609 54 g-index
86 all docs	86 docs citations	86 times ranked	2619 citing authors

#	Article	IF	Citations
1	Modeling Metal Stocks and Flows: A Review of Dynamic Material Flow Analysis Methods. Environmental Science & Technology, 2014, 48, 2102-2113.	4.6	350
2	The relevance of information and communication technologies for environmental sustainability â€“ A prospective simulation study. Environmental Modelling and Software, 2006, 21, 1618-1629.	1.9	268
3	ICT for Sustainability: An Emerging Research Field. Advances in Intelligent Systems and Computing, 2015, , 3-36.	0.5	150
4	Scenario Analysis. Journal of Industrial Ecology, 2010, 14, 826-843.	2.8	128
5	Effects of Internet-based multiple-site conferences on greenhouse gas emissions. Telematics and Informatics, 2012, 29, 362-374.	3.5	125
6	How LCA contributes to the environmental assessment of higher order effects of ICT application: A review of different approaches. Journal of Cleaner Production, 2019, 219, 698-712.	4.6	92
7	Unintended Side Effects of the Digital Transition: European Scientistsâ€™ Messages from a Proposition-Based Expert Round Table. Sustainability, 2018, 10, 2001.	1.6	82
8	Environmental impacts of lighting technologies â€” Life cycle assessment and sensitivity analysis. Environmental Impact Assessment Review, 2011, 31, 334-343.	4.4	81
9	Assessing Internet energy intensity: A review of methods and results. Environmental Impact Assessment Review, 2014, 45, 63-68.	4.4	74
10	Electronic wasteâ€”an emerging risk?. Environmental Impact Assessment Review, 2005, 25, 431-435.	4.4	73
11	Assessing Indirect Environmental Effects of Information and Communication Technology (ICT): A Systematic Literature Review. Sustainability, 2018, 10, 2662.	1.6	71
12	Conceptualizing the Digital Sharing Economy in the Context of Sustainability. Sustainability, 2018, 10, 4453.	1.6	70
13	Prospective Impacts of Electronic Textiles on Recycling and Disposal. Journal of Industrial Ecology, 2011, 15, 496-511.	2.8	66
14	Life cycle assessment of second generation (2G) and third generation (3G) mobile phone networks. Environment International, 2006, 32, 656-675.	4.8	65
15	The digital sharing economy: A confluence of technical and social sharing. Environmental Innovation and Societal Transitions, 2021, 38, 127-139.	2.5	65
16	Sustainable software productsâ€”Towards assessment criteria for resource and energy efficiency. Future Generation Computer Systems, 2018, 86, 199-210.	4.9	62
17	Environmental impacts of an international conference. Environmental Impact Assessment Review, 2002, 22, 543-557.	4.4	61
18	The end of life treatment of second generation mobile phone networks: Strategies to reduce the environmental impact. Environmental Impact Assessment Review, 2005, 25, 540-566.	4.4	57

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19	Rebound effects of progress in information technology. Poiesis & Praxis, 2006, 4, 19-38.	0.3	56
20	Assessing the Human, Social, and Environmental Risks of Pervasive Computing. Human and Ecological Risk Assessment (HERA), 2004, 10, 853-874.	1.7	55
21	The Direct Energy Demand of Internet Data Flows. Journal of Industrial Ecology, 2013, 17, 680-688.	2.8	54
22	A dynamic probabilistic material flow modeling method. Environmental Modelling and Software, 2016, 76, 69-80.	1.9	54
23	LICARA nanoSCAN - A tool for the self-assessment of benefits and risks of nanoproducts. Environment International, 2016, 91, 150-160.	4.8	53
24	Smart labels in municipal solid waste â€" a case for the Precautionary Principle?. Environmental Impact Assessment Review, 2005, 25, 567-586.	4.4	52
25	The Things of the Internet of Things in BPMN. Lecture Notes in Business Information Processing, 2015, , 285-297.	0.8	48
26	Service Lifetime, Storage Time, and Disposal Pathways of Electronic Equipment: A Swiss Case Study. Journal of Industrial Ecology, 2018, 22, 196-208.	2.8	44
27	Impact assessment and policy learning in the European Commission. Environmental Impact Assessment Review, 2008, 28, 90-105.	4.4	42
28	Where Do Our Resources Go? Indium, Neodymium, and Gold Flows Connected to the Use of Electronic Equipment in Switzerland. Sustainability, 2018, 10, 2658.	1.6	41
29	Analysis of energy footprints associated with recycling of glass and plasticâ€"case studies for industrial ecology. Ecological Modelling, 2004, 174, 175-189.	1.2	39
30	One laptop per child, local refurbishment or overseas donations? Sustainability assessment of computer supply scenarios for schools in Colombia. Journal of Environmental Management, 2009, 90, 3498-3511.	3.8	39
31	Gamification and Sustainable Consumption: Overcoming the Limitations of Persuasive Technologies. Advances in Intelligent Systems and Computing, 2015, , 367-385.	0.5	39
32	Sources of variation in life cycle assessments of smartphones and tablet computers. Environmental Impact Assessment Review, 2020, 84, 106416.	4.4	35
33	Digital transformationâ€"life cycle assessment of digital services, multifunctional devices and cloud computing. International Journal of Life Cycle Assessment, 2020, 25, 2093-2098.	2.2	32
34	ICT and Sustainable Development. International Federation for Information Processing, 2010, , 227-235.	0.4	32
35	The Precautionary Principle as a Framework for a Sustainable Information Society. Journal of Business Ethics, 2009, 85, 493-505.	3.7	31
36	SUSTAINABLE DEVELOPMENT AND ICT INTERPRETED IN A NATURAL SCIENCE CONTEXT. Information, Communication and Society, 2010, 13, 7-22.	2.6	29

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37	Use, Storage, and Disposal of Electronic Equipment in Switzerland. Environmental Science & Technology, 2017, 51, 4494-4502.	4.6	27
38	The Precautionary Principle in the Information Society. Human and Ecological Risk Assessment (HERA), 2004, 10, 787-799.	1.7	25
39	Evaluating the sustainability of electronic media: Strategies for life cycle inventory data collection and their implications for LCA results. Environmental Modelling and Software, 2014, 56, 27-36.	1.9	24
40	The Energy Intensity of the Internet: Home and Access Networks. Advances in Intelligent Systems and Computing, 2015, , 137-155.	0.5	23
41	The Energy Demand of ICT: A Historical Perspective and Current Methodological Challenges. Advances in Intelligent Systems and Computing, 2015, , 71-103.	0.5	22
42	Impacts of telecommuting on time use and travel: A case study of a neighborhood telecommuting center in Stockholm. Travel Behaviour & Society, 2021, 23, 157-165.	2.4	19
43	Conceptualizing the impact of information and communication technology on individual time and energy use. Telematics and Informatics, 2020, 49, 101375.	3.5	18
44	Enhancing Agent-Based Models with Discrete Choice Experiments. Jasss, 2016, 19, .	1.0	18
45	Modeling the Effects of ICT on Environmental Sustainability: Revisiting a System Dynamics Model Developed for the European Commission. Advances in Intelligent Systems and Computing, 2015, , 449-474.	0.5	15
46	Motivating students on ICT-related study programs to engage with the subject of sustainable development. International Journal of Sustainability in Higher Education, 2018, 19, 642-656.	1.6	14
47	Dematerialization Through Electronic Media?. Advances in Intelligent Systems and Computing, 2015, , 405-421.	0.5	14
48	The Energy Intensity of the Internet: Edge and Core Networks. Advances in Intelligent Systems and Computing, 2015, , 157-170.	0.5	14
49	An Approach to Assess Indirect Environmental Effects of Digitalization Based on a Time-Use Perspective. Progress in IS, 2018, , 67-78.	0.5	14
50	Digital sufficiency: conceptual considerations for ICTs on a finite planet. Annales Des Telecommunications/Annals of Telecommunications, 2023, 78, 277-295.	1.6	14
51	Contribution-based prioritization of LCI database improvements: Method design, demonstration, and evaluation. Environmental Modelling and Software, 2016, 86, 204-218.	1.9	12
52	Environmental informatics. Environmental Modelling and Software, 2006, 21, 1517-1518.	1.9	11
53	Environmental Assessment of End-of-Life Treatment Options for a GSM 900 Antenna Rack (12 pp paper) Tj ETQq1 1 0.784314 rgBT /O	2.2	11
54	ICT-Enabled Sharing Economy and Environmental Sustainabilityâ€"A Resource-Oriented Approach. Progress in IS, 2018, , 53-65.	0.5	11

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55	Empirical validation of an agent-based model of wood markets in Switzerland. PLoS ONE, 2018, 13, e0190605.	1.1	10
56	Ethical Issues in Ubiquitous Computingâ€"Three Technology Assessment Studies Revisited. Advances in Intelligent Systems and Computing, 2015, , 45-60.	0.5	9
57	An agent-based model of wood markets: Scenario analysis. Forest Policy and Economics, 2018, 95, 26-36.	1.5	9
58	Digitally Enabled Sharing and the Circular Economy: Towards a Framework for Sustainability Assessment. Progress in IS, 2020, , 105-116.	0.5	7
59	The Relevance of Digital Sharing Business Models for Sustainability. , 2020, , .		7
60	Contribution-based prioritization of LCI database improvements: the most important unit processes in ecoinvent. International Journal of Life Cycle Assessment, 2019, 24, 1778-1792.	2.2	6
61	Environmental Management Information Systems for Production and Recycling. IFIP Advances in Information and Communication Technology, 1997, , 21-29.	0.5	6
62	Toward a method for assessing the energy impacts of telecommuting based on time-use data. Travel Behaviour & Society, 2022, 27, 107-116.	2.4	6
63	Information technology and renewable energy â€" Modelling, simulation, decision support and environmental assessment. Environmental Impact Assessment Review, 2015, 52, 1.	4.4	5
64	Betriebliche Umweltinformationssysteme (BUIS) - eine Literaturanalyse. Informatik-Spektrum, 1997, 20, 159-167.	1.0	4
65	Sustainable development and information technology. Environmental Impact Assessment Review, 2002, 22, 445-447.	4.4	3
66	Towards sustainable pervasive computing - Guest editorial. IEEE Technology and Society Magazine, 2005, 24, 7-8.	0.6	3
67	Information and Communication Technologies for a more Sustainable World. , 2011, , 410-418.		3
68	15.Betriebliche Umweltinformatik. , 1995, , 295-312.		2
69	Using Systems Thinking and System Dynamics Modeling to Understand Rebound Effects. Progress in IS, 2016, , 237-255.	0.5	2
70	Betriebliche und Ã¼berbetriebliche Umweltinformationssysteme als informationstechnische Infrastruktur fÃ¼r das Stoffstrommanagement. , 1995, , 193-205.		2
71	Anforderungen an ein Ã¶kologisch orientiertes Logistik-Informationssystem. Informatik Aktuell, 1992, , 254-263.	0.4	2
72	Service lifetime and disposal pathways of business devices. , 2016, , .		1

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73	An Information System Supporting Cap and Trade in Organizations. Advances in Intelligent Systems and Computing, 2015, , 285-299.	0.5	1
74	The Material Side of Virtualization. , 2007, , 5-6.		1
75	Transparenz normativer Orientierungen in partizipativen TA-Projekten. TATuP - Zeitschrift FÃ¼r TechnikfolgenabschÃ¤tzung in Theorie Und Praxis, 2019, 28, 58-64.	0.2	1
76	A General Modelling and Simulation System for Sustainability Impact Assessment in the Field of Traffic and Logistics. , 2001, , 167-185.		1
77	Information and Communication Technologies for a more Sustainable World. , 2011, , 36-45.		1
78	A Typology of Digital Sharing Business Models: A Design Science Research Approach. Lecture Notes in Computer Science, 2020, , 297-308.	1.0	1
79	Risiken und Nebenwirkungen der Informatisierung des Alltags. , 2007, , 187-205.		1
80	Introduction: Technology Assessment for Pervasive Computing. Human and Ecological Risk Assessment (HERA), 2004, 10, 759-761.	1.7	0
81	Pervasive Computing â€“ A Case for the Precautionary Principle?. Lecture Notes in Computer Science, 2005, , 1-2.	1.0	0
82	Representation, Propagation, and Interpretation of Uncertain Knowledge in Dynamic Probabilistic Material Flow Models. Environmental Modeling and Assessment, 2021, 26, 709-721.	1.2	0
83	Simulation der Smart Grid Integration eines modernen BÃ¼rogebÃudes am Beispiel von IBM-Schweiz. , 2013, , 59-68.		0