

Karel Kellens

List of Publications by Year in descending order

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49
papers

2,726
citations

393982

19
h-index

253896

43
g-index

54
all docs

54
docs citations

54
times ranked

2183
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards energy and resource efficient manufacturing: A processes and systems approach. CIRP Annals - Manufacturing Technology, 2012, 61, 587-609.	1.7	865
2	Methodology for systematic analysis and improvement of manufacturing unit process life-cycle inventory (UPLCI) CO2PE! initiative (cooperative effort on process emissions in manufacturing). Part 1: Methodology description. International Journal of Life Cycle Assessment, 2012, 17, 69-78.	2.2	193
3	Sustainability of additive manufacturing: An overview on its energy demand and environmental impact. Additive Manufacturing, 2018, 21, 694-704.	1.7	188
4	Environmental Dimensions of Additive Manufacturing: Mapping Application Domains and Their Environmental Implications. Journal of Industrial Ecology, 2017, 21, S49.	2.8	184
5	Environmental Impact of Additive Manufacturing Processes: Does AM Contribute to a More Sustainable Way of Part Manufacturing?. Procedia CIRP, 2017, 61, 582-587.	1.0	167
6	Methodology for systematic analysis and improvement of manufacturing unit process life cycle inventory (UPLCI) CO2PE! initiative (cooperative effort on process emissions in manufacturing). Part 2: case studies. International Journal of Life Cycle Assessment, 2012, 17, 242-251.	2.2	125
7	Environmental modelling of aluminium recycling: a Life Cycle Assessment tool for sustainable metal management. Journal of Cleaner Production, 2015, 105, 357-370.	4.6	101
8	Environmental impact modeling of selective laser sintering processes. Rapid Prototyping Journal, 2014, 20, 459-470.	1.6	93
9	Environmental assessment of solid state recycling routes for aluminium alloys: Can solid state processes significantly reduce the environmental impact of aluminium recycling?. CIRP Annals - Manufacturing Technology, 2015, 64, 37-40.	1.7	90
10	Energy Efficient Trajectories for an Industrial ABB Robot. Procedia CIRP, 2014, 15, 105-110.	1.0	74
11	Critical comparison of methods to determine the energy input for discrete manufacturing processes. CIRP Annals - Manufacturing Technology, 2012, 61, 63-66.	1.7	63
12	Unit process impact assessment for discrete part manufacturing: A state of the art. CIRP Journal of Manufacturing Science and Technology, 2011, 4, 129-135.	2.3	59
13	Environmental Impact Analysis of Primary Aluminium Production at Country Level. Procedia CIRP, 2016, 40, 209-213.	1.0	49
14	Charting the Environmental Dimensions of Additive Manufacturing and 3D Printing. Journal of Industrial Ecology, 2017, 21, S9.	2.8	48
15	Energy and Resource Efficiency of Laser Cutting Processes. Physics Procedia, 2014, 56, 854-864.	1.2	44
16	A comprehensive analysis of electric energy consumption of single point incremental forming processes. Journal of Cleaner Production, 2014, 67, 173-186.	4.6	38
17	Forecasting waste compositions: A case study on plastic waste of electronic display housings. Waste Management, 2015, 46, 28-39.	3.7	31
18	Automation and robotics in the cultivation of pome fruit: Where do we stand today?. Journal of Field Robotics, 2021, 38, 513-531.	3.2	28

#	ARTICLE	IF	CITATIONS
19	Preliminary Environmental Assessment of Electrical Discharge Machining. , 2011, , 377-382.		27
20	Environmental Performance of Sheet Metal Working Processes. Key Engineering Materials, 2011, 473, 21-26.	0.4	20
21	Exploring the potential of magnetorheology in robotic grippers. Procedia CIRP, 2018, 76, 127-132.	1.0	20
22	Energy related environmental impact reduction opportunities in machine design: case study of a laser cutting machine. International Journal of Sustainable Manufacturing, 2010, 2, 80.	0.3	19
23	Laser Cutting with Direct Diode Laser. Physics Procedia, 2013, 41, 558-565.	1.2	18
24	Environmental Impact Reduction in Discrete Manufacturing: Examples for Non-Conventional Processes. Procedia CIRP, 2013, 6, 27-34.	1.0	15
25	Economic and Environmental Aware Maintenance Optimization. Procedia CIRP, 2014, 15, 343-348.	1.0	15
26	Current Status, Future Expectations and Mitigation Potential Scenarios for China's Primary Aluminium Industry. Procedia CIRP, 2016, 48, 295-300.	1.0	13
27	Exergy Efficiency Definitions for Manufacturing Processes. , 2011, , 329-334.		13
28	Environmental Analysis of the Air Bending Process. AIP Conference Proceedings, 2011, , .	0.3	11
29	Probabilistic Decision Model for Adaptive Task Planning in Human-Robot Collaborative Assembly Based on Designer and Operator Intents. IEEE Robotics and Automation Letters, 2021, 6, 7325-7332.	3.3	11
30	Towards robust intention estimation based on object affordance enabling natural human-robot collaboration in assembly tasks. Procedia CIRP, 2018, 78, 255-260.	1.0	10
31	Benchmarking low-cost inertial measurement units for indoor localisation and navigation of AGVs. Procedia CIRP, 2019, 86, 204-209.	1.0	10
32	Life cycle assessment of a hot-pressing machine to manufacture particleboards: hotspots, environmental indicators, and solutions. International Journal of Life Cycle Assessment, 2020, 25, 1059-1077.	2.2	10
33	Techno-Economic Assessment of Robotic Sorting of Aluminium Scrap. Procedia CIRP, 2022, 105, 152-157.	1.0	8
34	Electric Energy Consumption Analysis of SPIF Processes. Key Engineering Materials, 0, 549, 547-554.	0.4	5
35	Impact reduction potential by usage anticipation under comfort trade-off conditions. CIRP Annals - Manufacturing Technology, 2016, 65, 33-36.	1.7	5
36	Environmental Comparison of Metal Coating Processes. Procedia CIRP, 2015, 29, 420-425.	1.0	4

#	ARTICLE	IF	CITATIONS
37	Solid state recycling of aluminium alloys via a porthole die hot extrusion process: Scaling up to production. AIP Conference Proceedings, 2017, , .	0.3	4
38	Environmental Impact Modeling of Discrete Part Manufacturing Processes. , 2012, , 557-562.		3
39	Human-robot mobile co-manipulation of flexible objects by fusing wrench and skeleton tracking data. International Journal of Computer Integrated Manufacturing, 2023, 36, 30-50.	2.9	3
40	Intelligent occupancy-driven thermostat by dynamic user profiling. , 2016, , .		2
41	Accuracy of geometry data exchange using STEP AP242. Procedia CIRP, 2018, 78, 219-224.	1.0	2
42	Complex deformation routes for direct recycling aluminium alloy scrap via industrial hot extrusion. AIP Conference Proceedings, 2018, , .	0.3	2
43	Robotic Cultivation of Pome Fruit: A Benchmark Study of Manipulation Tools"From Research to Industrial Standards. Agronomy, 2021, 11, 1922.	1.3	2
44	Development of an assistive webtool for robotic gripper selection. Procedia CIRP, 2022, 106, 250-257.	1.0	2
45	Development of a membrane-shaped MR-based composite draping tool. Procedia CIRP, 2019, 86, 167-172.	1.0	1
46	Cleaner Production. , 2014, , 205-208.		1
47	Cleaner Production. , 2019, , 272-275.		1
48	Simulation-driven parameter study of concentric Halbach cylinders for magnetorheological robotic grasping. Journal of Magnetism and Magnetic Materials, 2022, 546, 168637.	1.0	1
49	Cleaner Production. , 2016, , 1-4.		0