David J Hoelzle

List of Publications by Year
in descending order

51 papers	878 citations	567144 15 h-index	526166 27 g-index
52 all docs	52 docs citations	52 times ranked	959 citing authors

#	Article	IF	Citations
1	The effect of BMP-2 on micro- and macroscale osteointegration of biphasic calcium phosphate scaffolds with multiscale porosity. Acta Biomaterialia, 2010, 6, 3283-3291.	4.1	103
2	Basis Task Approach to Iterative Learning Control With Applications to Micro-Robotic Deposition. IEEE Transactions on Control Systems Technology, 2011, 19, 1138-1148.	3.2	94
3	Experimental measurement of residual stress and distortion in additively manufactured stainless steel components with various dimensions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 689-700.	2.6	60
4	On Spatial Iterative Learning Control via 2-D Convolution: Stability Analysis and Computational Efficiency. IEEE Transactions on Control Systems Technology, 2016, 24, 1504-1512.	3.2	58
5	Cross-coupled iterative learning control of systems with dissimilar dynamics: design and implementation. International Journal of Control, 2011, 84, 1223-1233.	1.2	40
6	Multiscale Porosity Directs Bone Regeneration in Biphasic Calcium Phosphate Scaffolds. ACS Biomaterials Science and Engineering, 2017, 3, 2768-2778.	2.6	33
7	Micro-robotic deposition guidelines by a design of experiments approach to maximize fabrication reliability for the bone scaffold application. Acta Biomaterialia, 2008, 4, 897-912.	4.1	32
8	Release of Applied Mechanical Loading Stimulates Intercellular Calcium Waves in Drosophila WingÂDiscs. Biophysical Journal, 2017, 113, 491-501.	0.2	32
9	Microfluidic device design, fabrication, and testing protocols. Protocol Exchange, 0, , .	0.3	31
10	Application of robust monotonically convergent spatial iterative learning control to microscale additive manufacturing. Mechatronics, 2018, 56, 157-165.	2.0	28
11	Fast prediction of thermal distortion in metal powder bed fusion additive manufacturing: Part 2, a quasi-static thermo-mechanical model. Additive Manufacturing, 2018, 22, 869-882.	1.7	27
12	A multi-objective iterative learning control approach for additive manufacturing applications. Control Engineering Practice, 2017, 64, 74-87.	3.2	23
13	Fast prediction of thermal distortion in metal powder bed fusion additive manufacturing: Part 1, a thermal circuit network model. Additive Manufacturing, 2018, 22, 852-868.	1.7	21
14	Iterative Learning Control for robotic deposition using machine vision. , 2008, , .		19
15	Bumpless Transfer Filter for Exogenous Feedforward Signals. IEEE Transactions on Control Systems Technology, 2014, 22, 1581-1588.	3.2	19
16	Robust Monotonically Convergent Spatial Iterative Learning Control: Interval Systems Analysis via Discrete Fourier Transform. IEEE Transactions on Control Systems Technology, 2019, 27, 2470-2483.	3.2	17
17	Net shape fabrication of calcium phosphate scaffolds with multiple material domains. Biofabrication, 2016, 8, 015005.	3.7	16
18	An electrohydrodynamic jet printer with integrated metrology. Mechatronics, 2018, 56, 268-276.	2.0	16

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19	Design and Manufacture of Combinatorial Calcium Phosphate Bone Scaffolds. Journal of Biomechanical Engineering, 2011, 133, 101001.	0.6	15
20	A Microfluidic Technique to Probe Cell Deformability. Journal of Visualized Experiments, 2014, , e51474.	0.2	15
21	A Dynamical Model of Drop Spreading in Electrohydrodynamic Jet Printing. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2017, 139, .	1.3	15
22	A new spatial Iterative Learning Control approach for improved micro-Additive Manufacturing. , 2014, , .		14
23	A curved electrode electrostatic actuator designed for large displacement and force in an underwater environment. Journal of Micromechanics and Microengineering, 2017, 27, 095009.	1.5	13
24	Direct metal laser-sintered stainless steel: comparison of microstructure and hardness between different planes. International Journal of Advanced Manufacturing Technology, 2018, 95, 4031-4037.	1.5	12
25	An application of spatial Iterative Learning Control to micro-additive manufacturing. , 2016, , .		10
26	Time-Scale Transformed Iterative Learning Control for a Class of Nonlinear Systems With Uncertain Trial Duration. IEEE Transactions on Control Systems Technology, 2020, 28, 1972-1979.	3.2	9
27	Electrohydrodynamic Jet Printing of 1D Photonic Crystals: Part IIâ€"Optical Design and Reflectance Characteristics. Advanced Materials Technologies, 2020, 5, 2000431.	3.0	9
28	Experimental investigation of curved electrode actuator dynamics in viscous dielectric media. Applied Physics Letters, 2018, 113, 074102.	1.5	8
29	LPV models for jet-printed heightmap control. , 2019, , .		8
30	Bumpless transfer for a flexible adaptation of Iterative Learning Control. , 2011, , .		7
31	A large displacement, high frequency, underwater microelectromechanical systems actuator. Journal of Applied Physics, 2015, 117, 014503.	1.1	7
32	System Identification of a Discrete Repetitive Process Model for Electrohydrodynamic Jet Printing. , 2018, , .		7
33	Electrohydrodynamic Jet Printing of Oneâ€Dimensional Photonic Crystals: Part Iâ€"An Empirical Model for Multiâ€Material Multiâ€Layer Fabrication. Advanced Materials Technologies, 2020, 5, 2000386.	3.0	6
34	Iterative Learning Control using a basis signal library. , 2009, , .		5
35	Hybrid modeling and identification of jetting dynamics in electrohydrodynamic jet printing. , 2017, , .		5
36	On the feasibility of a temperature state observer for powder bed fusion additive manufacturing. , 2018, , .		5

#	Article	IF	Citations
37	Hybrid Control of Flowrate in Microextrusion-Based Direct-Write Additive Manufacturing. , 2022, 6, 97-102.		5
38	Spatial Iterative Learning Control for Multi-material Three-Dimensional Structures. ASME Letters in Dynamic Systems and Control, 2021, 1, .	0.4	5
39	Flexible iterative learning control using a library based interpolation scheme. , 2012, , .		3
40	A Model of Liquid-Drop Spreading for Electrohydrodynamic Jet Printing. , 2015, , .		3
41	On-chip three-dimensional tissue histology for microbiopsies. Biomicrofluidics, 2016, 10, .	1.2	3
42	Higher-Order Spatial Iterative Learning Control for Additive Manufacturing. , 2021, , .		3
43	Reinforcement Learning Enabled Autonomous Manufacturing Using Transfer Learning and Probabilistic Reward Modeling. , 2023, 7, 508-513.		3
44	Hybrid Continuous-Discrete Repetitive Process Modeling of Meniscus Dynamics in Electrohydrodynamic Jet Printing. IFAC-PapersOnLine, 2017, 50, 13414-13419.	0.5	2
45	Cross Coupled Iterative Learning Control of Dissimilar Dynamical Systems. , 2009, , .		2
46	Hybrid System Model of Microextrusion-Based Direct-Write Additive Manufacturing. , 2019, , .		2
47	A Surgical Robot for Intracorporeal Additive Manufacturing of Tissue Engineering Constructs. IEEE Robotics and Automation Letters, 2022, 7, 7495-7502.	3.3	2
48	Method to study particle flow bias at a channel bifurcation in a microfluidic device. Analytical Methods, 2017, 9, 6719-6724.	1.3	1
49	Hybrid Control of Flowrate in Microextrusion-Based Direct-Write Additive Manufacturing. , 2021, , .		0
50	Spatial ILC for Multi-Objective Systems. , 2014, , .		0
51	Coupled Dynamics of Material Delivery and Robotic Manipulator Axes in Endoscopic Additive Manufacturing. , 2019, , .		0