Placid M Ferreira

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

141 papers

7,588 citations

45 h-index 85 g-index

151 ext. papers

8,542 ext. citations

6.6 avg, IF

5.63 L-index

#	Paper	IF	Citations
141	High-resolution electrohydrodynamic jet printing. <i>Nature Materials</i> , 2007 , 6, 782-9	27	1011
140	Printed assemblies of inorganic light-emitting diodes for deformable and semitransparent displays. <i>Science</i> , 2009 , 325, 977-81	33.3	617
139	Ultrathin silicon solar microcells for semitransparent, mechanically flexible and microconcentrator module designs. <i>Nature Materials</i> , 2008 , 7, 907-15	27	534
138	Mechanisms, Capabilities, and Applications of High-Resolution Electrohydrodynamic Jet Printing. <i>Small</i> , 2015 , 11, 4237-66	11	317
137	Microstructured elastomeric surfaces with reversible adhesion and examples of their use in deterministic assembly by transfer printing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 17095-100	11.5	280
136	Nonlithographic patterning and metal-assisted chemical etching for manufacturing of tunable light-emitting silicon nanowire arrays. <i>Nano Letters</i> , 2010 , 10, 1582-8	11.5	181
135	Design, analysis, fabrication and testing of a parallel-kinematic micropositioning XY stage. <i>International Journal of Machine Tools and Manufacture</i> , 2007 , 47, 946-961	9.4	175
134	Towards an in vivo biologically inspired nanofactory. <i>Nature Nanotechnology</i> , 2007 , 2, 3-7	28.7	152
133	Computation of stiffness and stiffness bounds for parallel link manipulators. <i>International Journal of Machine Tools and Manufacture</i> , 1999 , 39, 321-342	9.4	152
132	Hierarchical patterns of three-dimensional block-copolymer films formed by electrohydrodynamic jet printing and self-assembly. <i>Nature Nanotechnology</i> , 2013 , 8, 667-75	28.7	138
131	Polynomial-complexity deadlock avoidance policies for sequential resource allocation systems. <i>IEEE Transactions on Automatic Control</i> , 1997 , 42, 1344-1357	5.9	116
130	Verification of form tolerances part II: Cylindricity and straightness of a median line. <i>Precision Engineering</i> , 1995 , 17, 144-156	2.9	111
129	Feed-rate optimization with jerk constraints for generating minimum-time trajectories. International Journal of Machine Tools and Manufacture, 2007 , 47, 1941-1955	9.4	109
128	Porosity control in metal-assisted chemical etching of degenerately doped silicon nanowires. <i>Nanotechnology</i> , 2012 , 23, 305304	3.4	107
127	Active, Programmable Elastomeric Surfaces with Tunable Adhesion for Deterministic Assembly by Transfer Printing. <i>Advanced Functional Materials</i> , 2012 , 22, 4476-4484	15.6	107
126	Nanoscale, electrified liquid jets for high-resolution printing of charge. <i>Nano Letters</i> , 2010 , 10, 584-91	11.5	106
125	Shear-enhanced adhesiveless transfer printing for use in deterministic materials assembly. <i>Applied Physics Letters</i> , 2011 , 98, 264104	3.4	106

(2008-2012)

124	Thermal conductivity of silicon nanowire arrays with controlled roughness. <i>Journal of Applied Physics</i> , 2012 , 112, 114306	2.5	105
123	Modeling of ductile-mode material removal in rotary ultrasonic machining. <i>International Journal of Machine Tools and Manufacture</i> , 1998 , 38, 1399-1418	9.4	105
122	Rotary ultrasonic machining for face milling of ceramics. <i>International Journal of Machine Tools and Manufacture</i> , 1995 , 35, 1033-1046	9.4	104
121	A correct and scalable deadlock avoidance policy for flexible manufacturing systems. <i>IEEE Transactions on Automation Science and Engineering</i> , 1998 , 14, 796-809		101
120	Scaling laws for jet pulsations associated with high-resolution electrohydrodynamic printing. <i>Applied Physics Letters</i> , 2008 , 92, 123109	3.4	99
119	Printable Single-Crystal Silicon Micro/Nanoscale Ribbons, Platelets and Bars Generated from Bulk Wafers. <i>Advanced Functional Materials</i> , 2007 , 17, 3051-3062	15.6	98
118	Verification of form tolerances part I: Basic issues, flatness, and straightness. <i>Precision Engineering</i> , 1995 , 17, 131-143	2.9	89
117	Mapping the effects of positioning errors on the volumetric accuracy of five-axis CNC machine tools. <i>International Journal of Machine Tools and Manufacture</i> , 1993 , 33, 417-437	9.4	87
116	Elastomer surfaces with directionally dependent adhesion strength and their use in transfer printing with continuous roll-to-roll applications. <i>Advanced Materials</i> , 2012 , 24, 2117-22	24	85
115	Plastic flow in rotary ultrasonic machining of ceramics. <i>Journal of Materials Processing Technology</i> , 1995 , 48, 771-777	5.3	81
114	An experimental investigation of rotary ultrasonic face milling. <i>International Journal of Machine Tools and Manufacture</i> , 1999 , 39, 1327-1344	9.4	80
113	An analytical quadratic model for the geometric error of a machine tool. <i>Journal of Manufacturing Systems</i> , 1986 , 5, 51-63	9.1	79
112	. Journal of Microelectromechanical Systems, 2012 , 21, 1049-1058	2.5	75
111	On-chip inductors with self-rolled-up SiNx nanomembrane tubes: a novel design platform for extreme miniaturization. <i>Nano Letters</i> , 2012 , 12, 6283-8	11.5	73
110	A desktop electrohydrodynamic jet printing system. <i>Mechatronics</i> , 2010 , 20, 611-616	3	63
109	Electrochemical nanoimprinting with solid-state superionic stamps. <i>Nano Letters</i> , 2007 , 7, 446-51	11.5	63
108	Kinematic modeling of quasistatic errors of three-axis machining centers. <i>International Journal of Machine Tools and Manufacture</i> , 1994 , 34, 85-100	9.4	63
107	A SOI-MEMS-based 3-DOF planar parallel-kinematics nanopositioning stage. <i>Sensors and Actuators A: Physical</i> , 2008 , 147, 340-351	3.9	61

106	. IEEE Transactions on Control Systems Technology, 2010 , 18, 336-351	4.8	60
105	Functional protein microarrays by electrohydrodynamic jet printing. <i>Analytical Chemistry</i> , 2012 , 84, 10	01 2. %	53
104	Control of high-resolution electrohydrodynamic jet printing. Control Engineering Practice, 2011, 19, 12	:663.1927:	3 ₅₃
103	Direct Imprinting of Porous Silicon via Metal-Assisted Chemical Etching. <i>Advanced Functional Materials</i> , 2016 , 26, 2929-2939	15.6	53
102	Sensitive detection of protein and miRNA cancer biomarkers using silicon-based photonic crystals and a resonance coupling laser scanning platform. <i>Lab on A Chip</i> , 2013 , 13, 4053-64	7.2	51
101	Silicon nanowires with controlled sidewall profile and roughness fabricated by thin-film dewetting and metal-assisted chemical etching. <i>Nanotechnology</i> , 2013 , 24, 225305	3.4	50
100	Design Guidelines for Deadlock-Handling Strategies in Flexible Manufacturing Systems. <i>Flexible Services and Manufacturing Journal</i> , 1997 , 9, 5-30		50
99	The Application and Evaluation of Banker's Algorithm for Deadlock-Free Buffer Space Allocation in Flexible Manufacturing Systems. Flexible Services and Manufacturing Journal, 1998, 10, 73-100		50
98	A novel parallel-kinematics mechanisms for integrated, multi-axis nanopositioning. <i>Precision Engineering</i> , 2008 , 32, 7-19	2.9	49
97	Thermo-mechanical modeling of laser-driven non-contact transfer printing: two-dimensional analysis. <i>Soft Matter</i> , 2012 , 8, 7122	3.6	46
96	A novel monolithic piezoelectric actuated flexure-mechanism based wire clamp for microelectronic device packaging. <i>Review of Scientific Instruments</i> , 2015 , 86, 045106	1.7	44
95	Design, fabrication and testing of a silicon-on-insulator (SOI) MEMS parallel kinematicsXYstage. Journal of Micromechanics and Microengineering, 2007, 17, 1154-1161	2	43
94	Electrostatically Actuated Cantilever With SOI-MEMS Parallel Kinematic \$XY\$ Stage. <i>Journal of Microelectromechanical Systems</i> , 2009 , 18, 641-651	2.5	42
93	A prototype printer for laser driven micro-transfer printing. <i>Journal of Manufacturing Processes</i> , 2012 , 14, 416-424	5	39
92	Robust Control of a Parallel- Kinematic Nanopositioner. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2008 , 130,	1.6	37
91	Analysis of the Influence of Fixture Locator Errors on the Compliance of Work Part Features to Geometric Tolerance Specifications. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2003 , 125, 609-616	3.3	34
90	Generation of workpiece orientations for machining using a rule-based system. <i>Robotics and Computer-Integrated Manufacturing</i> , 1988 , 4, 545-555	9.2	34
89	Device Architectures for Enhanced Photon Recycling in Thin-Film Multijunction Solar Cells. <i>Advanced Energy Materials</i> , 2015 , 5, 1400919	21.8	33

(2011-2008)

88	Simultaneous actuation and displacement sensing for electrostatic drives. <i>Journal of Micromechanics and Microengineering</i> , 2008 , 18, 035011	2	33	
87	The Use of Shape Memory Polymers for Microassembly by Transfer Printing. <i>Journal of Microelectromechanical Systems</i> , 2014 , 23, 1012-1014	2.5	31	
86	Heterogeneously Assembled Metamaterials and Metadevices via 3D Modular Transfer Printing. <i>Scientific Reports</i> , 2016 , 6, 27621	4.9	31	
85	. Journal of Microelectromechanical Systems, 2016 , 25, 69-77	2.5	30	
84	A novel parallel-kinematics mechanism for integrated, multi-axis nanopositioning. <i>Precision Engineering</i> , 2008 , 32, 20-33	2.9	30	
83	Stress focusing for controlled fracture in microelectromechanical systems. <i>Applied Physics Letters</i> , 2007 , 90, 083110	3.4	30	
82	High Precision Electrohydrodynamic Printing of Polymer Onto Microcantilever Sensors. <i>IEEE Sensors Journal</i> , 2011 , 11, 2246-2253	4	29	
81	Optimal Budgeting of Quasistatic Machine Tool Errors. <i>Journal of Engineering for Industry</i> , 1994 , 116, 42-53		29	
80	Axisymmetric thermo-mechanical analysis of laser-driven non-contact transfer printing. <i>International Journal of Fracture</i> , 2012 , 176, 189-194	2.3	26	
79	Parameter estimation and model verification of first order quasistatic error model for three-axis machining centers. <i>International Journal of Machine Tools and Manufacture</i> , 1994 , 34, 101-125	9.4	26	
78	Flexible manufacturing system structural control and the Neighborhood Policy, part 1. Correctness and scalability. <i>IIE Transactions</i> , 1997 , 29, 877-887		24	
77	An AGV routing policy reflecting the current and future state of semiconductor and LCD production lines. <i>International Journal of Production Research</i> , 2001 , 39, 3901-3921	7.8	24	
76	Extreme Antiscaling Performance of Slippery Omniphobic Covalently Attached Liquids. <i>ACS Applied Materials & Discourse Materials & D</i>	9.5	23	
75	Development of a high-speed 3-axis machine tool using a novel parallel-kinematics X-Y table. <i>International Journal of Machine Tools and Manufacture</i> , 2004 , 44, 1355-1371	9.4	22	
74	Computational approaches to compensating quasistatic errors of three-axis machining centers. <i>International Journal of Machine Tools and Manufacture</i> , 1994 , 34, 127-145	9.4	22	
73	Kinematic Analysis and Synthesis of Deterministic 3-2-1 Locator Schemes for Machining Fixtures. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2001 , 123, 708-719	3.3	20	
72	A 2 Degree-of-Freedom SOI-MEMS Translation Stage With Closed-Loop Positioning. <i>Journal of Microelectromechanical Systems</i> , 2012 , 21, 13-22	2.5	19	
71	Direct metal nano-imprinting using an embossed solid electrolyte stamp. <i>Nanotechnology</i> , 2011 , 22, 15.	53042	19	

70	Celeritas: a coloured Petri net approach to simulation and control of flexible manufacturing systems. <i>International Journal of Production Research</i> , 1992 , 30, 1925-1956	7.8	18
69	Painting and Direct Writing of Silver Nanostructures on Phosphate Glass with Electron Beam Irradiation. <i>Advanced Functional Materials</i> , 2015 , 25, 5261-5268	15.6	17
68	Solid-state electrochemical nanoimprinting of copper. <i>Journal of Vacuum Science & Technology B</i> , 2007 , 25, 2419		17
67	Fouling modeling and prediction approach for heat exchangers using deep learning. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 159, 120112	4.9	16
66	High bandwidth control of precision motion instrumentation. <i>Review of Scientific Instruments</i> , 2008 , 79, 103704	1.7	15
65	Composite Structured Surfaces for Durable Dropwise Condensation. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 156, 119890	4.9	15
64	A modular-architecture controller for CNC systems based on open-source electronics. <i>Journal of Manufacturing Systems</i> , 2017 , 44, 317-323	9.1	14
63	Electrochemical nanoimprinting of silicon. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 10264-10269	11.5	14
62	Robust Control of a MEMS Probing Device. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014 , 19, 100-108	5.5	14
61	Robust MIMO control of a parallel kinematics nano-positioner for high resolution high bandwidth tracking and repetitive tasks 2007 ,		14
60	Auto-triangulation and auto-trilateration. Part 1. Fundamentals. <i>Precision Engineering</i> , 2002 , 26, 237-24	9 2.9	14
59	Optimal Placement of Fixture Clamps: Minimizing the Maximum Clamping Forces. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2002 , 124, 686-694	3.3	14
58	Optimal Placement of Fixture Clamps: Maintaining Form Closure and Independent Regions of Form Closure. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2002 , 124, 676-685	5 3.3	14
57	. Journal of Microelectromechanical Systems, 2015 , 24, 1016-1028	2.5	13
56	Laminated micro-machine: Design and fabrication of a flexure-based Delta robot. <i>Journal of Manufacturing Processes</i> , 2016 , 24, 370-375	5	13
55	Automated micro-transfer printing with cantilevered stamps. <i>Journal of Manufacturing Processes</i> , 2012 , 14, 90-97	5	13
54	Controllable doping and wrap-around contacts to electrolessly etched silicon nanowire arrays. <i>Nanotechnology</i> , 2014 , 25, 375701	3.4	13
53	Materials-to-device design of hybrid metal-polymer heat exchanger tubes for low temperature waste heat recovery. <i>International Journal of Heat and Mass Transfer</i> , 2019 , 143, 118497	4.9	11

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52	SERS EM field enhancement study through fast Raman mapping of Sierpinski carpet arrays. <i>Journal of Raman Spectroscopy</i> , 2010 , 41, 1124-1130	2.3	11
51	Multi-physics modeling for laser micro-transfer printing delamination. <i>Journal of Manufacturing Processes</i> , 2015 , 20, 414-424	5	10
50	Exploiting differential etch rates to fabricate large-scale nozzle arrays with protudent geometry. Journal of Micromechanics and Microengineering, 2007 , 17, 923-930	2	10
49	Flexible manufacturing system structural control and the Neighborhood Policy, part 1. Correctness and scalability. <i>IIE Transactions</i> , 1997 , 29, 877-887		9
48	Auto-triangulation and auto-trilateration. <i>Precision Engineering</i> , 2002 , 26, 250-262	2.9	9
47	A new paradigm for organizing networks of computer numerical control manufacturing resources in cloud manufacturing. <i>Procedia Manufacturing</i> , 2018 , 26, 1318-1329	1.5	9
46	Solid-state superionic stamping with silver iodide-silver metaphosphate glass. <i>Nanotechnology</i> , 2011 , 22, 425301	3.4	8
45	Flexible manufacturing system structural control and the Neighborhood Policy, part 2. Generalization, optimization, and efficiency. <i>IIE Transactions</i> , 1997 , 29, 889-899		8
44	EMBench: A Rapid Prototyping Environment for Numerical Control Systems 2002, 7		8
43	Characterization of Delamination in Laser Microtransfer Printing. <i>Journal of Micro and Nano-Manufacturing</i> , 2014 , 2,	1.3	7
42	An active MEMS probe for fine position and force measurements. <i>Precision Engineering</i> , 2014 , 38, 738-7	48 9	7
41	LIParameter estimates for volumetric error in models of machine tools. <i>Precision Engineering</i> , 1997 , 20, 179-187	2.9	7
40	Applications of GMDH-type modeling in manufacturing. Journal of Manufacturing Systems, 1988, 7, 241-	253	7
39	Multi-objective optimization of peel and shear strengths in ultrasonic metal welding using machine learning-based response surface methodology. <i>Mathematical Biosciences and Engineering</i> , 2020 , 17, 741	1-7 42	. 7
38	A new novel local search integer-programming-based heuristic for PCB assembly on collect-and-place machines. <i>Mathematical Programming Computation</i> , 2016 , 8, 1-45	7.8	6
37	Electrochemical direct writing and erasing of silver nanostructures on phosphate glass using atomic force microscopy. <i>Nanotechnology</i> , 2017 , 28, 065301	3.4	5
36	Broadband, Tunable, Miniaturized Vibration Energy Harvester Using Nonlinear Elastomer Beams and Stretchable Interconnects. <i>Advanced Materials Technologies</i> , 2019 , 4, 1900783	6.8	5
35	Microfabricated Instrumented Composite Stamps for Transfer Printing. <i>Journal of Micro and Nano-Manufacturing</i> , 2015 , 3,	1.3	5

34	Carbon Nanotube Electronic Displacement Encoder with Sub-Nanometer Resolution. <i>Journal of Computational and Theoretical Nanoscience</i> , 2007 , 4, 574-577	0.3	5
33	An experimental and computational study of size-dependent contact-angle of dewetted metal nanodroplets below its melting temperature. <i>Applied Physics Letters</i> , 2016 , 109, 213101	3.4	5
32	Parallel-kinematics XYZ MEMS part 2: Fabrication and experimental characterization. <i>Precision Engineering</i> , 2016 , 46, 147-157	2.9	4
31	Printing: Mechanisms, Capabilities, and Applications of High-Resolution Electrohydrodynamic Jet Printing (Small 34/2015). <i>Small</i> , 2015 , 11, 4412-4412	11	4
30	Determination of minimum number of sensors and their locations for an automated facility: An algorithmic approach. <i>European Journal of Operational Research</i> , 1992 , 63, 231-239	5.6	4
29	Parallel-kinematics XYZ MEMS part 1: Kinematics and design for fabrication. <i>Precision Engineering</i> , 2016 , 46, 135-146	2.9	4
28	A Cloud-Monitoring Service for Manufacturing Environments. <i>Procedia Manufacturing</i> , 2018 , 26, 1330-1	3 <u>3.9</u>	4
27	Finite volume simulation framework for die casting with uncertainty quantification. <i>Applied Mathematical Modelling</i> , 2019 , 74, 132-150	4.5	3
26	Quasistatic error modeling and model testing for a 5-axis machine with a redundant axis. <i>Journal of Manufacturing Processes</i> , 2018 , 31, 875-883	5	3
25	Controlled directional growth of silver microwires on a solid electrolyte surface. <i>Applied Physics Letters</i> , 2010 , 96, 024101	3.4	3
24	Exploiting transport of guest metal ions in a host ionic crystal lattice for nanofabrication: Cu nanopatterning with Ag2S. <i>Applied Physics A: Materials Science and Processing</i> , 2009 , 97, 863-868	2.6	3
23	An Integrated Rapid Prototyping Environment for Reconfigurable Manufacturing Systems 2003 , 737		3
22	Algebraic geometry and group theory in geometric constraint satisfaction for computer-aided design and assembly planning. <i>IIE Transactions</i> , 1996 , 28, 281-294		3
21	An Integrated Environment for the Design and Control of Deadlock-Free Flexible Manufacturing Cells 2004 ,		3
20	Active Elastomeric Composite Dense Array Stamp For Micro-transfer Printing. <i>Procedia Manufacturing</i> , 2020 , 48, 64-70	1.5	3
19	Crowd-Sourced Data and Analysis Tools for Advancing the Chemical Vapor Deposition of Graphene: Implications for Manufacturing. <i>ACS Applied Nano Materials</i> , 2020 , 3, 10144-10155	5.6	3
18	Direct Metal Nano-patterning Using Embossed Solid Electrolyte. <i>Materials Research Society Symposia Proceedings</i> , 2009 , 1156, 1		2
17	Flexible manufacturing system structural control and the Neighborhood Policy, part 2. Generalization, optimization, and efficiency. <i>IIE Transactions</i> , 1997 , 29, 889-899		2

LIST OF PUBLICATIONS

16	Development of a novel piezo-driven parallel-kinematics single crystal silicon micropositioning XY stage 2005 ,		2
15	Feasibility Analysis of Nanostructured Planar Focusing Collectors for Concentrating Solar Power Applications. <i>ACS Applied Energy Materials</i> , 2018 , 1, 6927-6935	6.1	2
14	An Experimental Investigation into Plate-to-Roll Patterning with Solid-State Superionic Stamping. <i>Procedia Manufacturing</i> , 2019 , 34, 424-431	1.5	1
13	Dynamics modeling and verification of a large-displacement precision preloaded-flexure stage. <i>Journal of Manufacturing Processes</i> , 2019 , 43, 36-45	5	1
12	Analyses of advanced iterated tour partitioning heuristics for generalized vehicle routing problems. <i>Networks</i> , 2013 , 61, 290-308	1.6	1
11	Solid State Electrochemical Direct Writing of Copper Nanostructures on an Ion Conductive Phosphate Glass Using Atomic Force Microscopy. <i>Procedia Manufacturing</i> , 2017 , 10, 641-651	1.5	1
10	Analysis and Design for Rapid Prototyping Mechanism Using Hybrid Flexural Pivots. <i>Procedia Manufacturing</i> , 2015 , 1, 779-791	1.5	1
9	Modeling of charge-mass transport in solid electrolyte-based electrochemical nanomanufacturing process. <i>Journal of Manufacturing Processes</i> , 2015 , 18, 60-66	5	1
8	High precision polymer deposition onto microcantilever sensors using electrohydrodynamic printing 2010 ,		1
7	Ultrathin silicon solar microcells for semitransparent, mechanically flexible and microconcentrator module designs 2010 , 38-46		O
6	Quasistatic Error Modeling and Model Testing for a 5-Axis Machine. <i>Procedia Manufacturing</i> , 2017 , 10, 443-455	1.5	
5	Direct Writing: Painting and Direct Writing of Silver Nanostructures on Phosphate Glass with Electron Beam Irradiation (Adv. Funct. Mater. 33/2015). <i>Advanced Functional Materials</i> , 2015 , 25, 5242-	5242	
4	Structured Nanoaperture Vertical Cavity Surface-Emitting Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013 , 19, 4601504-4601504	3.8	
3	An Easy-to-Manufacture 2 Degree-of-Freedom Remote Center of Compliance for Micro-Transfer Printing. <i>Key Engineering Materials</i> , 2010 , 447-448, 471-477	0.4	
2	Characterizing the Role of Deformation during Electrochemical Etching of Metallic Films. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1297, 175		
1	Stamping colors with solid-state superionic stamping (S4). <i>Journal of Manufacturing Processes</i> , 2022 , 79, 305-313	5	