

Christopher Saldana

List of Publications by Year in descending order

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Version: 2024-02-01

62
papers

1,762
citations

430843

18
h-index

289230

40
g-index

62
all docs

62
docs citations

62
times ranked

1896
citing authors

#	ARTICLE	IF	CITATIONS
1	Advances in material and friction data for modelling of metal machining. CIRP Annals - Manufacturing Technology, 2017, 66, 731-754.	3.6	198
2	Visualizing Chemomechanical Degradation of a Solid-State Battery Electrolyte. ACS Energy Letters, 2019, 4, 1475-1483.	17.4	196
3	Linking void and interphase evolution to electrochemistry in solid-state batteries using operando X-ray tomography. Nature Materials, 2021, 20, 503-510.	27.5	194
4	A study of the interactive effects of strain, strain rate and temperature in severe plastic deformation of copper. Acta Materialia, 2009, 57, 5491-5500.	7.9	147
5	Porous polymeric materials by 3D printing of photocurable resin. Materials Horizons, 2017, 4, 442-449.	12.2	114
6	Surface integrity analysis of machined Inconel 718 over multiple length scales. CIRP Annals - Manufacturing Technology, 2012, 61, 99-102.	3.6	100
7	Controlling deformation and microstructure on machined surfaces. Acta Materialia, 2011, 59, 4538-4547.	7.9	87
8	Enhancing material removal processes using modulation-assisted machining. Tribology International, 2011, 44, 1225-1235.	5.9	62
9	Stabilizing nanostructured materials by coherent nanotwins and their grain boundary triple junction drag. Applied Physics Letters, 2009, 94, .	3.3	54
10	Thin wall deposition of IN625 using directed energy deposition. Journal of Manufacturing Processes, 2020, 56, 1366-1373.	5.9	49
11	Uncertainty quantification and validation of 3D lattice scaffolds for computer-aided biomedical applications. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 71, 428-440.	3.1	44
12	Thermal stability and strength of deformation microstructures in pure copper. Acta Materialia, 2012, 60, 4107-4116.	7.9	43
13	Controlling gradation of surface strains and nanostructuring by large-strain machining. Scripta Materialia, 2009, 60, 17-20.	5.2	40
14	A Review of Modern Communication Technologies for Digital Manufacturing Processes in Industry 4.0. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	2.2	25
15	Vacancies, twins, and the thermal stability of ultrafine-grained copper. Applied Physics Letters, 2011, 99, .	3.3	21
16	Micro-scale components from high-strength nanostructured alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 503, 172-175.	5.6	20
17	Deformation field heterogeneity in punch indentation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20130807.	2.1	18
18	Surfaces by vibration/modulation-assisted texturing for tribological applications. International Journal of Advanced Manufacturing Technology, 2016, 85, 909-920.	3.0	18

#	ARTICLE	IF	CITATIONS
19	Anomalous evolution of microstructure and crystallographic texture during indentation. <i>Acta Materialia</i> , 2016, 105, 25-34.	7.9	18
20	Effects of Controlled Modulation on Interface Tribology and Deformation in Machining. <i>Tribology Letters</i> , 2009, 35, 221-227.	2.6	16
21	An Adaptive Geometry Transformation and Repair Method for Hybrid Manufacturing. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2019, 141, .	2.2	15
22	Modified cavity expansion formulation for circular indentation and experimental validation. <i>International Journal of Solids and Structures</i> , 2016, 97-98, 129-136.	2.7	13
23	Adaptive geometry transformation and repair for hybrid manufacturing. <i>Procedia Manufacturing</i> , 2018, 26, 228-236.	1.9	13
24	Build Orientation Effects on Mechanical Properties of 316SS Components Produced by Directed Energy Deposition. <i>Procedia Manufacturing</i> , 2020, 48, 730-736.	1.9	13
25	Deformation field evolution in indentation of a porous brittle solid. <i>International Journal of Solids and Structures</i> , 2015, 66, 35-45.	2.7	12
26	Modulation-Assisted Machining: A New Paradigm in Material Removal Processes. <i>Advanced Materials Research</i> , 0, 223, 514-522.	0.3	11
27	Toward Rapid Manufacturability Analysis Tools for Engineering Design Education. <i>Procedia Manufacturing</i> , 2016, 5, 1183-1196.	1.9	11
28	Enhanced subsurface grain refinement during transient shear-based surface generation. <i>Acta Materialia</i> , 2016, 116, 114-123.	7.9	11
29	A decision support methodology for integrated machining process and operation plans for sustainability and productivity assessment. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 107, 3207-3230.	3.0	11
30	Simulation-based User-centered Design: An Approach to Device Development during COVID-19. <i>Pediatric Quality & Safety</i> , 2021, 6, e427.	0.8	11
31	Incipient straining in severe plastic deformation methods. <i>Journal of Materials Research</i> , 2014, 29, 718-728.	2.6	10
32	A Novel Three-Layer IoT Architecture for Shared, Private, Scalable, and Real-time Machine Learning from Ubiquitous Cyber-Physical Systems. <i>Procedia Manufacturing</i> , 2020, 48, 959-967.	1.9	10
33	Production analysis of new machining-based deformation processes for nanostructured materials.. <i>International Journal of Material Forming</i> , 2008, 1, 459-462.	2.0	9
34	Effects of microstructure and strength on wear performance in rough milling of austempered ductile iron. <i>International Journal of Cast Metals Research</i> , 2016, 29, 62-67.	1.0	9
35	Deformation and Microstructure in Machining. <i>Advanced Materials Research</i> , 0, 223, 325-331.	0.3	8
36	Deformation heterogeneity and texture in surface severe plastic deformation of copper. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20150486.	2.1	8

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37	Subsurface damage in milling of lightweight open-cell aluminium foams. CIRP Annals - Manufacturing Technology, 2017, 66, 125-128.	3.6	8
38	Quantitative x-ray Analysis: Applications in Machining of Porous Metallic Foams. Procedia CIRP, 2016, 45, 335-338.	1.9	7
39	Quantifying the spread in crystallographic textures due to transients in strain path in shot-peening. Materialia, 2018, 2, 231-249.	2.7	7
40	Effect of textured surfaces created by modulation-assisted machining on the Stribeck curve and wear properties of steel-aluminum contact. International Journal of Advanced Manufacturing Technology, 2018, 99, 399-409.	3.0	7
41	Data registration for multi-method qualification of additive manufactured components. Additive Manufacturing, 2020, 35, 101292.	3.0	7
42	Real-Time Outlier Detection and Bayesian Classification using Incremental Computations for Efficient and Scalable Stream Analytics for IoT for Manufacturing. Procedia Manufacturing, 2020, 48, 968-979.	1.9	7
43	Assessing laser powder bed fusion system geometric errors through artifact-based methods. Procedia Manufacturing, 2021, 53, 395-406.	1.9	7
44	Low-temperature machining in a fully submerged cryogenic environment. Machining Science and Technology, 2017, 21, 19-36.	2.5	6
45	Model-free subtractive manufacturing from computed tomography data. Manufacturing Letters, 2017, 13, 44-47.	2.2	6
46	Structure and Deformation of Gradient Metal Foams Produced by Machining. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	2.2	6
47	Quantification of fabric in cemented granular materials. Computers and Geotechnics, 2020, 125, 103644.	4.7	6
48	Gradient microstructure and texture in wedge-based severe plastic burnishing of copper. Journal of Materials Research, 2018, 33, 1046-1056.	2.6	5
49	Error qualification for multi-axis BC-type machine tools. Journal of Manufacturing Systems, 2019, 52, 211-216.	13.9	5
50	Exploring Registration of Optical, CMM and XCT for Verification of Supplemental Surfaces to Define AM Lattices: Application to Cylindrical and Spherical Surfaces. Procedia CIRP, 2020, 92, 181-186.	1.9	5
51	Effects of spatial energy distribution-induced porosity on mechanical properties of laser powder bed fusion 316L stainless steel. Additive Manufacturing, 2021, 39, 101875.	3.0	5
52	Thermal stability of nanotwinned and nanocrystalline microstructures produced by cryogenic shear deformation. Philosophical Magazine, 2014, 94, 3413-3430.	1.6	4
53	Adaptive repair and digitization for hybrid manufacturing. Procedia Manufacturing, 2019, 34, 154-160.	1.9	4
54	Voxel-based modeling of transient material removal in machining. International Journal of Advanced Manufacturing Technology, 2021, 116, 1575-1589.	3.0	4

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55	Effects of Extrinsic Noise Factors on Machine Learning-Based Chatter Detection in Machining. Smart and Sustainable Manufacturing Systems, 2021, 5, 167-180.	0.7	4
56	Information modeling to incorporate sustainability into production plans. , 2013, , .		3
57	Deformation field interaction in sequential circular indentation of a strain hardening material. Philosophical Magazine, 2019, 99, 1259-1276.	1.6	3
58	The effect of WAAM process parameters on process conditions and production metrics in the fabrication of single-pass multi-layer wall artifacts. International Journal of Advanced Manufacturing Technology, 2022, 119, 531-547.	3.0	3
59	Effect of coaxial nozzle wear on catchment efficiency in direct energy deposition built components. Journal of Manufacturing Systems, 2022, 63, 524-538.	13.9	2
60	Surface Qualification Toolpath Optimization for Hybrid Manufacturing. Journal of Manufacturing and Materials Processing, 2021, 5, 94.	2.2	1
61	Defect Evolution in Tensile Loading of 316L Processed by Laser Powder Bed Fusion. Experimental Mechanics, 2022, 62, 969-983.	2.0	1
62	An Investigation into the Definition and Qualification of Form of Lattice Structures. Jom, 0, , 1.	1.9	0