

Guido Tosello

List of Publications by Year in descending order

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116
papers

1,887
citations

236925

25
h-index

330143

37
g-index

116
all docs

116
docs citations

116
times ranked

1562
citing authors

#	ARTICLE	IF	CITATIONS
1	Replication of micro and nano surface geometries. CIRP Annals - Manufacturing Technology, 2011, 60, 695-714.	3.6	159
2	State-of-the-art of fiber-reinforced polymers in additive manufacturing technologies. Journal of Reinforced Plastics and Composites, 2017, 36, 1061-1073.	3.1	99
3	A 3D edge detection technique for surface extraction in computed tomography for dimensional metrology applications. CIRP Annals - Manufacturing Technology, 2013, 62, 531-534.	3.6	65
4	Moulded Pulp Manufacturing: Overview and Prospects for the Process Technology. Packaging Technology and Science, 2017, 30, 231-249.	2.8	64
5	Study of process parameters effect on the filling phase of micro-injection moulding using weld lines as flow markers. International Journal of Advanced Manufacturing Technology, 2010, 47, 81-97.	3.0	55
6	3D Finite Element Simulation of Micro End-Milling by Considering the Effect of Tool Run-Out. Micromachines, 2017, 8, 187.	2.9	45
7	Impact of deep cores surface topography generated by micro milling on the demolding force in micro injection molding. Journal of Materials Processing Technology, 2017, 246, 211-223.	6.3	41
8	Applications of dimensional micro metrology to the product and process quality control in manufacturing of precision polymer micro components. CIRP Annals - Manufacturing Technology, 2009, 58, 467-472.	3.6	39
9	3D Printing of Reservoir Devices for Oral Drug Delivery: From Concept to Functionality through Design Improvement for Enhanced Mucoadhesion. ACS Biomaterials Science and Engineering, 2020, 6, 2478-2486.	5.2	38
10	Uncertainty analysis of point-by-point sampling complex surfaces using touch probe CMMs. Precision Engineering, 2010, 34, 16-21.	3.4	37
11	Dimensional measurement of micro-moulded parts by computed tomography. Measurement Science and Technology, 2012, 23, 125401.	2.6	36
12	Flow visualization and simulation of the filling process during injection molding. CIRP Journal of Manufacturing Science and Technology, 2017, 16, 12-20.	4.5	36
13	Characterization and analysis of weld lines on micro-injection moulded parts using atomic force microscopy (AFM). Wear, 2009, 266, 534-538.	3.1	32
14	Applications of Fiber-Reinforced Polymers in Additive Manufacturing. Procedia CIRP, 2017, 66, 312-316.	1.9	32
15	Investigation on capability of the reaming process using minimal quantity lubrication. CIRP Journal of Manufacturing Science and Technology, 2009, 2, 47-54.	4.5	31
16	Fabrication of micro-structured surfaces by additive manufacturing, with simulation of dynamic contact angle. Materials and Design, 2019, 176, 107839.	7.0	31
17	Replication of micro and nano-features on iPP by injection molding with fast cavity surface temperature evolution. Materials and Design, 2017, 133, 559-569.	7.0	30
18	Effects of micro-injection moulding process parameters on accuracy and precision of thermoplastic elastomer micro rings. Precision Engineering, 2018, 51, 353-361.	3.4	29

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19	Value chain and production cost optimization by integrating additive manufacturing in injection molding process chain. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 100, 783-795.	3.0	29
20	A Soft Tooling process chain employing Additive Manufacturing for injection molding of a 3D component with micro pillars. <i>Journal of Manufacturing Processes</i> , 2017, 27, 138-144.	5.9	28
21	Surface footprint in molds micromilling and effect on part demoldability in micro injection molding. <i>Journal of Manufacturing Processes</i> , 2017, 29, 160-174.	5.9	28
22	Correlating nano-scale surface replication accuracy and cavity temperature in micro-injection moulding using in-line process control and high-speed thermal imaging. <i>Journal of Manufacturing Processes</i> , 2019, 47, 367-381.	5.9	28
23	An international comparison of surface texture parameters quantification on polymer artefacts using optical instruments. <i>CIRP Annals - Manufacturing Technology</i> , 2016, 65, 529-532.	3.6	27
24	Manufacturing Signatures of Injection Molding and Injection Compression Molding for Micro-Structured Polymer Fresnel Lens Production. <i>Micromachines</i> , 2018, 9, 653.	2.9	27
25	High aspect ratio micro tool manufacturing for polymer replication using $\hat{1}/4$ EDM of silicon, selective etching and electroforming. <i>Microsystem Technologies</i> , 2008, 14, 1757-1764.	2.0	26
26	Process Factors Influence on Cavity Pressure Behavior in Microinjection Moulding. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2011, 133, .	2.2	26
27	Three-dimensional numerical modeling of an induction heated injection molding tool with flow visualization. <i>International Journal of Advanced Manufacturing Technology</i> , 2016, 85, 643-660.	3.0	26
28	Influence of the worn tool affected by built-up edge (BUE) on micro end-milling process performance: A 3D finite element modeling investigation. <i>International Journal of Precision Engineering and Manufacturing</i> , 2017, 18, 1321-1332.	2.2	26
29	Cavity Air Flow Behavior During Filling in Microinjection Molding. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2011, 133, .	2.2	25
30	Surface wear of TiN coated nickel tool during the injection moulding of polymer micro Fresnel lenses. <i>CIRP Annals - Manufacturing Technology</i> , 2012, 61, 535-538.	3.6	24
31	Additive manufacturing with vat polymerization method for precision polymer micro components production. <i>Procedia CIRP</i> , 2018, 75, 98-102.	1.9	22
32	Micro-Injection Moulding In-Line Quality Assurance Based on Product and Process Fingerprints. <i>Micromachines</i> , 2018, 9, 293.	2.9	22
33	Experimental Validation of Injection Molding Simulations of 3D Microparts and Microstructured Components Using Virtual Design of Experiments and Multi-Scale Modeling. <i>Micromachines</i> , 2020, 11, 614.	2.9	22
34	Influence of Injection and Cavity Pressure on the Demoulding Force in Micro-Injection Moulding. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2014, 136, .	2.2	21
35	Moulded pulp products manufacturing with thermoforming. <i>Packaging Technology and Science</i> , 2019, 32, 7-22.	2.8	21
36	An Industry 4.0 framework for tooling production using metal additive manufacturing-based first-time-right smart manufacturing system. <i>Procedia CIRP</i> , 2020, 93, 32-37.	1.9	21

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37	Effect of Process Parameters on Flow Length and Flash Formation in Injection Moulding of High Aspect Ratio Polymeric Micro Features. <i>Micromachines</i> , 2018, 9, 58.	2.9	20
38	Benchmarking of Laser Powder Bed Fusion Machines. <i>Journal of Manufacturing and Materials Processing</i> , 2019, 3, 85.	2.2	20
39	High precision validation of micro injection molding process simulations. <i>Journal of Manufacturing Processes</i> , 2019, 48, 236-248.	5.9	20
40	Influence of thermal ageing on the fracture and lifetime of additively manufactured mold inserts. <i>Engineering Failure Analysis</i> , 2020, 115, 104694.	4.0	20
41	Replication and dimensional quality control of industrial nanoscale surfaces using calibrated AFM measurements and SEM image processing. <i>CIRP Annals - Manufacturing Technology</i> , 2010, 59, 563-568.	3.6	18
42	Characterisation and analysis of microchannels and submicrometre surface roughness of injection moulded microfluidic systems using optical metrology. <i>Plastics, Rubber and Composites</i> , 2012, 41, 29-39.	2.0	18
43	Microfluidic chip designs process optimization and dimensional quality control. <i>Microsystem Technologies</i> , 2015, 21, 561-570.	2.0	18
44	Characterisation of demoulding parameters in micro-injection moulding. <i>Microsystem Technologies</i> , 2015, 21, 1677-1690.	2.0	17
45	Direct fabrication of bio-inspired gecko-like geometries with vat polymerization additive manufacturing method. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 085009.	2.6	17
46	Rheology of high melt strength polypropylene for additive manufacturing. <i>Advanced Materials Letters</i> , 2017, 8, 712-716.	0.6	17
47	Sub-1/4m structured lotus surfaces manufacturing. <i>Microsystem Technologies</i> , 2009, 15, 1327-1333.	2.0	14
48	On the Application of Replica Molding Technology for the Indirect Measurement of Surface and Geometry of Micromilled Components. <i>Micromachines</i> , 2017, 8, 195.	2.9	14
49	Experimental Approach for the Uncertainty Assessment of 3D Complex Geometry Dimensional Measurements Using Computed Tomography at the mm and Sub-mm Scales. <i>Sensors</i> , 2017, 17, 1137.	3.8	14
50	Quality control and process capability assessment for injection-moulded micro mechanical parts. <i>International Journal of Advanced Manufacturing Technology</i> , 2013, 66, 1295-1303.	3.0	13
51	Performance Evaluation of a Software Engineering Tool for Automated Design of Cooling Systems in Injection Moulding. <i>Procedia CIRP</i> , 2013, 7, 270-275.	1.9	13
52	Injection and injection-compression moulding replication capability for the production of polymer lab-on-a-chip with nano structures. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, 105001.	2.6	13
53	Optimization of corner micro end milling by finite element modelling for machining thin features. <i>Procedia CIRP</i> , 2019, 82, 362-367.	1.9	13
54	Experimental Characterization and Simulation of Thermoplastic Polymer Flow Hesitation in Thin-Wall Injection Molding Using Direct In-Mold Visualization Technique. <i>Micromachines</i> , 2020, 11, 428.	2.9	11

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55	Investigation of Product and Process Fingerprints for Fast Quality Assurance in Injection Molding of Micro-Structured Components. <i>Micromachines</i> , 2018, 9, 661.	2.9	10
56	A Soft Tooling Process Chain for Injection Molding of a 3D Component with Micro Pillars. <i>Journal of Visualized Experiments</i> , 2018, , .	0.3	10
57	Fully replicable and automated retention measurement setup for characterization of bio-adhesion. <i>HardwareX</i> , 2019, 6, e00071.	2.2	10
58	Functional Analysis Validation of Micro and Conventional Injection Molding Machines Performances Based on Process Precision and Accuracy for Micro Manufacturing. <i>Micromachines</i> , 2020, 11, 1115.	2.9	9
59	Hybrid Process Chain for the Integration of Direct Ink Writing and Polymer Injection Molding. <i>Micromachines</i> , 2020, 11, 509.	2.9	9
60	Modelling injection moulding machines for micro manufacture applications through functional analysis. <i>Procedia CIRP</i> , 2012, 2, 107-112.	1.9	8
61	Gate Design in Injection Molding of Microfluidic Components Using Process Simulations. <i>Journal of Micro and Nano-Manufacturing</i> , 2016, 4, .	0.7	8
62	Comparison of surface extraction techniques performance in computed tomography for 3D complex micro-geometry dimensional measurements. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 97, 441-453.	3.0	8
63	Comprehensive characterization and material modeling for ceramic injection molding simulation performance validations. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 102, 225-240.	3.0	8
64	Experimental investigation and thermo-mechanical modelling for tool life evaluation of photopolymer additively manufactured mould inserts in different injection moulding conditions. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 102, 403-420.	3.0	8
65	Hybrid tooling: a review of process chains for tooling microfabrication within 4M. , 2006, , 305-308.		7
66	Challenges in high accuracy surface replication for micro optics and micro fluidics manufacture. <i>International Journal of Precision Technology</i> , 2014, 4, 122.	0.2	7
67	Sacrificial Polymer Substrates in Photopolymerizationâ€Based Micro 3D Printing for Fabrication and Release of Complex Micro Components. <i>Advanced Materials Technologies</i> , 2019, 4, 1900378.	5.8	7
68	Flow characteristics of a thermoset fiber composite photopolymer resin in a vat polymerization additive manufacturing process. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	7
69	On the drying process of molded pulp products: Experiments and numerical modelling. <i>Drying Technology</i> , 2020, 38, 1644-1662.	3.1	7
70	Product Fingerprints for the Evaluation of Tool/Polymer Replication Quality in Injection Molding at the Micro/Nano Scale. <i>Nanomanufacturing and Metrology</i> , 2021, 4, 278-288.	3.0	7
71	Comparison of micro and conventional injection moulding based on process precision and accuracy. <i>Procedia CIRP</i> , 2018, 75, 149-154.	1.9	6
72	Geometrical and feature of size design effect on direct stereolithography micro additively manufactured components. <i>Procedia Structural Integrity</i> , 2018, 13, 1250-1255.	0.8	6

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73	Tolerance verification of precision injection moulded Fresnel lenses. <i>Procedia CIRP</i> , 2018, 75, 137-142.	1.9	6
74	A Finite Element Modeling Prediction in High Precision Milling Process of Aluminum 6082-T6. <i>Nanomanufacturing and Metrology</i> , 2018, 1, 236-247.	3.0	6
75	Functionality characterization of injection moulded micro-structured surfaces. <i>Precision Engineering</i> , 2019, 60, 594-601.	3.4	6
76	Additive Manufacturing of Microreservoir Devices for Oral Drug Delivery Using an Acculas BA-30ÂMicro-Stereolithography Instrument: A Feasibility Study. <i>Journal of the Electrochemical Society</i> , 2019, 166, B3257-B3263.	2.9	6
77	Advancements on the Simulation of the Micro Injection Moulding Process. , 2013, , .		6
78	A New Approach For The Validation Of Filling Simulations In Micro Injection Moulding. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	5
79	Product/Process Fingerprint in Micro Manufacturing. <i>Micromachines</i> , 2019, 10, 340.	2.9	5
80	On the implementation of metal additive manufacturing in the tooling process chain for polymer profile extrusion. <i>Procedia CIRP</i> , 2020, 93, 26-31.	1.9	5
81	Numerical Investigation into the Effect of Different Parameters on the Geometrical Precision in the Laser-Based Powder Bed Fusion Process Chain. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 3414.	2.5	5
82	Micro-Injection-Molding. , 2010, , 90-113.		4
83	A method for the characterization of the reflectance of anisotropic functional surfaces. <i>Surface Topography: Metrology and Properties</i> , 2018, 6, 034005.	1.6	4
84	Towards the integration of additively manufactured photopolymer dies in the polymer profile extrusion process chain. <i>Procedia CIRP</i> , 2020, 93, 3-8.	1.9	4
85	Dimensional metrology for process and part quality control in micro manufacturing. <i>International Journal of Precision Technology</i> , 2011, 2, 118.	0.2	3
86	Micro-injection Molding. , 2015, , 201-238.		3
87	Investigation on Product and Process Fingerprints for Integrated Quality Assurance in Injection Molding of Microstructured Biochips. <i>Journal of Manufacturing and Materials Processing</i> , 2018, 2, 79.	2.2	3
88	Evolution of additively manufactured injection molding inserts investigated by thermal simulations. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	3
89	Enabling Micro Injection Moulding Using a Soft Tooling Process Chain with Inserts Made of Mortar Material. <i>Micromachines</i> , 2021, 12, 857.	2.9	3
90	Optimization of injection molded polymer lab-on-a-chip for acoustic blood plasma separation using virtual design of experiment. <i>Procedia CIRP</i> , 2022, 107, 40-45.	1.9	3

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91	In-process assembly of micro metal inserts in a polymer matrix. , 2006, , 83-86.		2
92	Experimental Investigation of Comparative Process Capabilities of Metal and Ceramic Injection Molding for Precision Applications. Journal of Micro and Nano-Manufacturing, 2016, 4, .	0.7	2
93	Surface Replication in Micro Injection Molding. , 2018, , 83-112.		2
94	Modeling and Simulation of Micro Injection Molding. , 2018, , 213-240.		2
95	Micro Injection Molding Machines Technology. , 2018, , 1-30.		2
96	Direct flow visualization of hesitation during injection molding of thermoplastic polymers. AIP Conference Proceedings, 2019, , .	0.4	2
97	Effect of progressive tool wear on the functional performance of micro milling process of injection molding tool. Procedia CIRP, 2020, 87, 159-163.	1.9	2
98	Blister Formation in Film Insert Moulding. Micromachines, 2020, 11, 424.	2.9	2
99	Sub-structured lotus surfaces manufacturing. , 2008, , .		1
100	Analysis of cavity pressure and warpage of polyoxymethylene thin walled injection molded parts: Experiments and simulations. AIP Conference Proceedings, 2015, , .	0.4	1
101	Effects of fast mold temperature evolution on micro features replication quality during injection molding. AIP Conference Proceedings, 2017, , .	0.4	1
102	Multiscale dimensional tolerance specifications established on shrinkage assessment in ceramic micro injection molding. Procedia CIRP, 2018, 75, 143-148.	1.9	1
103	Metrological Quality Assurance in Micro Injection Molding. , 2018, , 241-288.		1
104	Internal fiber structure of a high-performing, additively manufactured injection molding insert. AIP Conference Proceedings, 2019, , .	0.4	1
105	Evaluation of surface roughness and geometrical characteristic of additive manufacturing inserts for precision injection moulding. AIP Conference Proceedings, 2019, , .	0.4	1
106	Manufacturing of three-dimensional optical functional surfaces by diamond engraving of RSA 905. Procedia CIRP, 2020, 87, 268-272.	1.9	1
107	Mechanical properties of additively manufactured die with numerical analysis in extrusion process. AIP Conference Proceedings, 2020, , .	0.4	1
108	Latest Advancements in Micro Nano Molding Technologies”Process Developments and Optimization, Materials, Applications, Key Enabling Technologies. Micromachines, 2022, 13, 609.	2.9	1

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109	Anomaly Detection in Float-Zone Crystal Growth of Silicon. Procedia CIRP, 2022, 107, 1515-1519.	1.9	1
110	Surface topography analysis for dimensional quality control of replication at the micrometre scale. Journal of Physics: Conference Series, 2011, 311, 012018.	0.4	0
111	Micro/Nano Manufacturing. Micromachines, 2017, 8, 297.	2.9	0
112	Surface extraction algorithm influence on the uncertainty assessment and tolerance compliance of computed tomography measurements. Procedia CIRP, 2018, 75, 119-124.	1.9	0
113	Influences of micro-ridges orientation and position on the replication of micro-structured surfaces by injection molding. AIP Conference Proceedings, 2020, , .	0.4	0
114	Moulded pulp products manufacturing with thermoforming. Packaging Technology and Science, 2021, 34, 71-73.	2.8	0
115	Increasing the productivity of selective laser sintering workflow by integrating cooling channels in the printing powder matrix. CIRP Annals - Manufacturing Technology, 2022, , .	3.6	0
116	Effektives Polieren der InnenflÄchen von additiv gefertigten EinsÄtzen fÄ¼r die Polymerextrusion mittels Plasmaelektrolytischem Polieren. , 2022, , 52-61.		0