

Nabil Anwer

List of Publications by Year in descending order

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Version: 2024-02-01

97
papers

3,277
citations

361413

20
h-index

161849

54
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103
all docs

103
docs citations

103
times ranked

2046
citing authors

#	ARTICLE	IF	CITATIONS
1	Fit4CAD: A point cloud benchmark for fitting simple geometric primitives in CAD objects. Computers and Graphics, 2022, 102, 133-143.	2.5	14
2	Generative adversarial networks for tolerance analysis. CIRP Annals - Manufacturing Technology, 2022, 71, 133-136.	3.6	8
3	Data-driven deviation generation for non-ideal surfaces of Skin Model Shapes. Procedia CIRP, 2022, 109, 1-6.	1.9	4
4	SHREC 2022: Fitting and recognition of simple geometric primitives on point clouds. Computers and Graphics, 2022, 107, 32-49.	2.5	6
5	An approach to analyze the position and orientation between two parts assembled by non-ideal planes. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2021, 235, 41-53.	2.4	3
6	Enabling technologies and tools for digital twin. Journal of Manufacturing Systems, 2021, 58, 3-21.	13.9	611
7	A function-oriented surface reconstruction framework for reverse engineering. CIRP Annals - Manufacturing Technology, 2021, 70, 135-138.	3.6	8
8	Toward non-default partitioning for compound feature identification in engineering design. Procedia CIRP, 2021, 100, 852-857.	1.9	3
9	Coevolution of digitalisation, organisations and Product Development Cycle. CIRP Annals - Manufacturing Technology, 2021, 70, 519-542.	3.6	10
10	A Framework for Curvature-Based CAD Mesh Partitioning. Lecture Notes in Mechanical Engineering, 2021, , 228-234.	0.4	0
11	Considerations of form defects and surface deformations for tolerance analysis of cylindrical components. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2021, 235, 1447-1457.	2.4	4
12	Traceable Reference Full Metrology Chain for Innovative Aspheric and Freeform Optical Surfaces Accurate at the Nanometer Level. Sensors, 2021, 21, 1103.	3.8	3
13	Enhanced Invariance Class Partitioning using Discrete Curvatures and Conformal Geometry. CAD Computer Aided Design, 2021, 133, 102985.	2.7	11
14	A Novel Method for Assemblability Evaluation of Non-Ideal Cylindrical Parts Assembly. CAD Computer Aided Design, 2021, 134, 103002.	2.7	6
15	Variation propagation modeling in multistage machining processes considering form errors and N-2-1 fixture layouts. International Journal of Advanced Manufacturing Technology, 2021, 116, 507-522.	3.0	4
16	STEP/STEP-NC-compliant manufacturing information of 3D printing for FDM technology. International Journal of Advanced Manufacturing Technology, 2021, 112, 1713-1728.	3.0	5
17	Tolerancing Informatics: Towards Automatic Tolerancing Information Processing in Geometrical Variations Management. Applied Sciences (Switzerland), 2021, 11, 198.	2.5	9
18	Polytope-based tolerance analysis with consideration of form defects and surface deformations. International Journal of Computer Integrated Manufacturing, 2021, 34, 57-75.	4.6	8

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19	Generation of Reference Softgauges for Minimum Zone Fitting Algorithms: Case of Aspherical and Freeform Surfaces. <i>Nanomaterials</i> , 2021, 11, 3386.	4.1	4
20	A new partitioning process for geometrical product specifications and verification. <i>Precision Engineering</i> , 2020, 62, 282-295.	3.4	13
21	Integration of surface deformations into polytope-based tolerance analysis: application to an over-constrained mechanism. <i>Procedia CIRP</i> , 2020, 92, 21-26.	1.9	8
22	Skin Model Shapes for multi-stage manufacturing in single-part production. <i>Procedia CIRP</i> , 2020, 92, 200-205.	1.9	6
23	Axiomatic Design of Customised Additive Manufacturing Artefacts. <i>Procedia CIRP</i> , 2020, 91, 899-904.	1.9	4
24	Convolutional Neural Network for geometric deviation prediction in Additive Manufacturing. <i>Procedia CIRP</i> , 2020, 91, 534-539.	1.9	29
25	Toward a Mathematical Definition of Reconstruction Operation for ISO GPS Standards. <i>Procedia CIRP</i> , 2020, 92, 152-157.	1.9	3
26	Geometric Tolerance Characterization of Laser Powder Bed Fusion Processes Based on Skin Model Shapes. <i>Procedia CIRP</i> , 2020, 92, 169-174.	1.9	8
27	Test artefacts for additive manufacturing: A design methodology review. <i>CIRP Journal of Manufacturing Science and Technology</i> , 2020, 31, 14-24.	4.5	22
28	Geometric tolerance and manufacturing assemblability estimation of metal additive manufacturing (AM) processes. <i>Materials and Design</i> , 2020, 194, 108842.	7.0	36
29	Data Fusion-based Method for the Assessment of Minimum Zone for Aspheric Optics. <i>Computer-Aided Design and Applications</i> , 2020, 18, 309-327.	0.6	3
30	Geometric deviation modeling with Statistical Shape Analysis in Design for Additive Manufacturing. <i>Procedia CIRP</i> , 2019, 84, 496-501.	1.9	7
31	Design of an ultra-high precision machine for form measurement. <i>Procedia CIRP</i> , 2019, 84, 942-947.	1.9	2
32	Editorial for the special issue on "smart manufacturing and digital factory". <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2019, 233, 1341-1341.	2.4	5
33	Integrated training in using different Coordinate Measuring Systems to support Digital Manufacturing. <i>Procedia Manufacturing</i> , 2019, 41, 634-641.	1.9	0
34	Form Defects Consideration in Polytope-Based Tolerance Analysis. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2019, 141, .	2.9	12
35	A novel representation method of non-ideal surface morphologies and its application in shaft-hole sealing simulation analysis. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2019, 233, 575-587.	2.4	13
36	Statistical Modal Analysis for Out-of-Plane Deviation Prediction in Additive Manufacturing Based on Finite Element Simulation. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2019, 141, .	2.2	12

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37	MODELOS DE INFORMACI3N DE PROCESO BASADOS EN STEP PARA LA FABRICACI3N ADITIVA: APLICACI3N AL MODELADO DE DEPOSICI3N POR FUSI3N. Dyna (Spain), 2019, 94, 197-202.	0.2	2
38	A LANDSLIDE PREDICTION MODEL BASED ON LOAD-UNLOAD RESPONSE RATIO THEORY AND ITS APPLICATION. Dyna (Spain), 2019, 94, 304-312.	0.2	2
39	Freeform Machining Features: New Concepts and Classification. Procedia CIRP, 2018, 67, 482-487.	1.9	6
40	Machine learning in tolerancing for additive manufacturing. CIRP Annals - Manufacturing Technology, 2018, 67, 157-160.	3.6	117
41	Investigation of minimum zone assessment methods for aspheric shapes. Precision Engineering, 2018, 52, 300-307.	3.4	12
42	Information exchange standards for design, tolerancing and Additive Manufacturing: a research review. International Journal on Interactive Design and Manufacturing, 2018, 12, 495-504.	2.2	21
43	An ontology-based modelling and reasoning framework for assembly sequence planning. International Journal of Advanced Manufacturing Technology, 2018, 94, 4187-4197.	3.0	40
44	Environmental Performance and Key Characteristics in Additive Manufacturing: A Literature Review. Procedia CIRP, 2018, 69, 148-153.	1.9	14
45	Consideration of Working Conditions in Assembly Tolerance Analysis. Procedia CIRP, 2018, 75, 226-231.	1.9	4
46	Toward a Classification of Partitioning Operations for Standardization of Geometrical Product Specifications and Verification. Procedia CIRP, 2018, 75, 325-330.	1.9	12
47	Freeform Machining Feature Recognition with Manufacturability Analysis. Procedia CIRP, 2018, 72, 1475-1480.	1.9	8
48	Shape Transformation Perspective for Geometric Deviation Modeling in Additive Manufacturing. Procedia CIRP, 2018, 75, 75-80.	1.9	12
49	Reference data simulation for L3 fitting of aspheres. Procedia CIRP, 2018, 75, 331-336.	1.9	1
50	On the usage of Least Material Requirement for Functional Tolerancing. Procedia CIRP, 2018, 75, 179-184.	1.9	5
51	Modeling Key Characteristics in the Value Chain of Additive Manufacturing. Procedia CIRP, 2018, 70, 90-95.	1.9	8
52	New development and distribution concepts for Education in Coordinate Metrology. Procedia CIRP, 2018, 75, 320-324.	1.9	8
53	A novel hybrid trust region minimax fitting algorithm for accurate dimensional metrology of aspherical shapes. Measurement: Journal of the International Measurement Confederation, 2018, 127, 134-140.	5.0	7
54	Tolerancing: Managing uncertainty from conceptual design to final product. CIRP Annals - Manufacturing Technology, 2018, 67, 695-717.	3.6	119

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55	Parametric Model Variability of the Proximal Femoral Sculptural Shape. International Journal of Precision Engineering and Manufacturing, 2018, 19, 1047-1054.	2.2	0
56	Shaping the digital twin for design and production engineering. CIRP Annals - Manufacturing Technology, 2017, 66, 141-144.	3.6	826
57	Deviation Modeling and Shape Transformation in Design for Additive Manufacturing. Procedia CIRP, 2017, 60, 211-216.	1.9	47
58	Review of Shape Deviation Modeling for Additive Manufacturing. Lecture Notes in Mechanical Engineering, 2017, , 241-250.	0.4	8
59	Comparative Study for the Metrological Characterization of Additive Manufacturing artefacts. Lecture Notes in Mechanical Engineering, 2017, , 191-200.	0.4	4
60	A Domain Ontology for Assembly Tolerance Design. , 2017, , .		4
61	An Improved Tolerance Analysis Method Based on Skin Model Shapes of Planar Parts. Procedia CIRP, 2016, 56, 237-242.	1.9	16
62	From reverse engineering to shape engineering in mechanical design. CIRP Annals - Manufacturing Technology, 2016, 65, 165-168.	3.6	60
63	Status and Prospects of Skin Model Shapes for Geometric Variations Management. Procedia CIRP, 2016, 43, 154-159.	1.9	33
64	Integration of Thermal Effects into Tolerancing Using Skin Model Shapes. Procedia CIRP, 2016, 43, 196-201.	1.9	21
65	A Proposal of Manufacturing Execution System Integration in Design for Additive Manufacturing. IFIP Advances in Information and Communication Technology, 2016, , 761-770.	0.7	3
66	Improved curvature-based registration methods for high-precision dimensional metrology. Precision Engineering, 2016, 46, 232-242.	3.4	4
67	STEP-NC based reverse engineering of in-process model of NC simulation. International Journal of Advanced Manufacturing Technology, 2016, 86, 3267-3288.	3.0	13
68	Novel automated methods for coarse and fine registrations of point clouds in high precision metrology. International Journal of Advanced Manufacturing Technology, 2015, 81, 795-810.	3.0	17
69	Contact and Mobility Simulation for Mechanical Assemblies Based on Skin Model Shapes. Journal of Computing and Information Science in Engineering, 2015, 15, .	2.7	33
70	Geometric Product Specification of Gears: The GeoSpelling Perspective. Procedia CIRP, 2015, 27, 90-96.	1.9	12
71	3D Measurement and Characterization of Ultra-precision Aspheric Surfaces. Procedia CIRP, 2015, 27, 41-46.	1.9	8
72	Skin Model Shapes: Offering New Potentials for Modelling Product Shape Variability. , 2015, , .		11

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73	Assembly Based Methods to Support Product Innovation in Design for Additive Manufacturing: An Exploratory Case Study. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	2.9	132
74	Machining Feature Recognition from In-Process Model of NC Simulation. Computer-Aided Design and Applications, 2015, 12, 383-392.	0.6	8
75	Feature Recognition for Virtual Machining. IEEE International Conference on Industrial Engineering and Engineering Management, 2015, , 123-127.	0.1	0
76	Unified variation modeling of sheet metal assembly considering rigid and compliant variations. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2015, 229, 495-507.	2.4	20
77	Error evaluation in reverse engineering of aspherical lenses. , 2015, , .		3
78	Ontology Model for Assembly Process Planning Knowledge. IEEE International Conference on Industrial Engineering and Engineering Management, 2015, , 419-423.	0.1	8
79	Geometric Enhanced Ontology Modeling for Assembly Process Planning. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2015, 51, 202.	0.5	7
80	Characterization of the main error sources of chromatic confocal probes for dimensional measurement. Measurement Science and Technology, 2014, 25, 044011.	2.6	28
81	Setup of a high-precision profilometer and comparison of tactile and optical measurements of standards. Measurement Science and Technology, 2014, 25, 044016.	2.6	19
82	From solid modelling to skin model shapes: Shifting paradigms in computer-aided tolerancing. CIRP Annals - Manufacturing Technology, 2014, 63, 137-140.	3.6	71
83	Skin Model Shapes: A new paradigm shift for geometric variations modelling in mechanical engineering. CAD Computer Aided Design, 2014, 50, 1-15.	2.7	202
84	A new method for aspherical surface fitting with large-volume datasets. Precision Engineering, 2014, 38, 935-947.	3.4	20
85	Comparison of tactile and chromatic confocal measurements of aspherical lenses for form metrology. International Journal of Precision Engineering and Manufacturing, 2014, 15, 821-829.	2.2	9
86	Metrological characterization of optical confocal sensors measurements (20 and 350 travel ranges). Journal of Physics: Conference Series, 2014, 483, 012015.	0.4	6
87	Reconstruction of freeform surfaces for metrology. Journal of Physics: Conference Series, 2014, 483, 012003.	0.4	4
88	Curvature-based Registration and Segmentation for Multisensor Coordinate Metrology. Procedia CIRP, 2013, 10, 112-118.	1.9	15
89	The skin model, a comprehensive geometric model for engineering design. CIRP Annals - Manufacturing Technology, 2013, 62, 143-146.	3.6	107
90	Statistical Tolerancing based on Variation of Point-set. Procedia CIRP, 2013, 10, 9-16.	1.9	4

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91	Discrete shape modeling for skin model representation. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2013, 227, 672-680.	2.4	48
92	A Comprehensive Framework for Skin Model Simulation. , 2012, , .		17
93	On the Use of Conformal Geometric Algebra in Geometric Constraint Solving. , 2011, , 217-232.		1
94	Quick GPS: A new CAT system for single-part tolerancing. CAD Computer Aided Design, 2010, 42, 768-780.	2.7	53
95	DIMENSIONAL METROLOGY OF FLEXIBLE PARTS: IDENTIFICATION OF GEOMETRICAL DEVIATIONS FROM OPTICAL MEASUREMENTS. , 2006, , .		8
96	Digital twin data: methods and key technologies. Digital Twin, 0, 1, 2.	0.0	7
97	Digital twin data: methods and key technologies. Digital Twin, 0, 1, 2.	0.0	18