Levent Burak Kara

List of Publications by Year
in descending order

61 papers	1,558 citations	361413 20 h-index	330143 37 g-index
62 all docs	62 docs citations	62 times ranked	1065 citing authors

#	ARTICLE	IF	CITATIONS
1	TopologyGAN: Topology Optimization Using Generative Adversarial Networks Based on Physical Fields Over the Initial Domain. Journal of Mechanical Design, Transactions of the ASME, 2021, 143, .	2.9	82
2	StressGAN: A Generative Deep Learning Model for Two-Dimensional Stress Distribution Prediction. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	2.2	47
3	Prediction of high frequency resistance in polymer electrolyte membrane fuel cells using long short term memory based model. Energy and AI, 2021, 3, 100045.	10.6	20
4	Soft tissue deformation tracking by means of an optimized fiducial marker layout with application to cancer tumors. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 225-237.	2.8	1
5	Stress Field Prediction in Cantilevered Structures Using Convolutional Neural Networks. Journal of Computing and Information Science in Engineering, 2020, 20, .	2.7	96
6	A Deep Reinforcement Learning Approach for Global Routing. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, .	2.9	46
7	Optimization of Part Consolidation for Minimum Production Costs and Time Using Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, .	2.9	32
8	Data-driven Upsampling of Point Clouds. CAD Computer Aided Design, 2019, 112, 1-13.	2.7	14
9	Wisdom of Microcrowds in Evaluating Solutions to Esoteric Engineering Problems. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	2.9	3
10	Concurrent Structure and Process Optimization for Minimum Cost Metal Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	2.9	23
11	High Degree of Freedom Hand Pose Tracking Using Limited Strain Sensing and Optical Training. Journal of Computing and Information Science in Engineering, 2019, 19, .	2.7	5
12	Designing coupling behaviors using compliant shape optimization. CAD Computer Aided Design, 2018, 101, 57-71.	2.7	6
13	Reconstruction of a Deformed Tumor Based on Fiducial Marker Registration: A Computational Feasibility Study. Technology in Cancer Research and Treatment, 2018, 17, 153303461876679.	1.9	2
14	A data-driven investigation and estimation of optimal topologies under variable loading configurations. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2016, 4, 61-72.	1.9	50
15	Providing formative assessment to students solving multipath engineering problems with complex arrangements of interacting parts: an intelligent tutor approach. Interactive Learning Environments, 2016, 24, 1864-1880.	6.4	3
16	Enhancing the Structural Performance of Additively Manufactured Objects Through Build Orientation Optimization. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	2.9	98
17	DMS2015-33: Generative interface structure design for supporting existing objects. Journal of Visual Languages and Computing, 2015, 31, 171-183.	1.8	8
18	Deciphering the Influence of Product Shape on Consumer Judgments Through Geometric Abstraction. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	2.9	14

#	Article	IF	Citations
19	Semantic shape editing using deformation handles. ACM Transactions on Graphics, 2015, 34, 1-12.	7.2	100
20	Characterizing the performance of an image-based recognizer for planar mechanical linkages in textbook graphics and hand-drawn sketches. Computers and Graphics, 2015, 52, 1-17.	2.5	5
21	Intermodal image-based recognition of planar kinematic mechanisms. Journal of Visual Languages and Computing, 2015, 27, 38-48.	1.8	5
22	Computer tutors can reduce student errors and promote solution efficiency for complex engineering problems. Journal of Visual Languages and Computing, 2014, 25, 1021-1029.	1.8	0
23	Computer tutors can address students learning to solve complex engineering problems. , 2014, , .		4
24	Co-constrained handles for deformation in shape collections. ACM Transactions on Graphics, 2014, 33, 1-11.	7.2	25
25	Recognizing planar kinematic mechanisms from a single image using evolutionary computation. , 2014, , .		5
26	Pencil-like sketch rendering of 3D scenes using trajectory planning and dynamic tracking. Journal of Visual Languages and Computing, 2014, 25, 481-493.	1.8	3
27	A Data-Driven Investigation and Estimation of Optimal Topologies under Variable Loading Configurations. Lecture Notes in Computer Science, 2014, , 387-399.	1.3	3
28	Modeling flow features with user-guided streamline parameterization. CAD Computer Aided Design, 2014, 46, 263-268.	2.7	4
29	Predictive Modeling for 2D Form Design. Lecture Notes in Computer Science, 2014, , 286-291.	1.3	0
30	Co-abstraction of shape collections. ACM Transactions on Graphics, 2012, 31, 1-11.	7.2	44
31	Sketch-based shape exploration using multiscale free-form surface editing. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2012, 26, 337-350.	1.1	1
32	Sketching and pen-based design interaction. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2012, 26, 241-243.	1.1	1
33	Free Form Surface Skinning of 3D Curve Clouds for Conceptual Shape Design. Journal of Computing and Information Science in Engineering, 2012, 12, .	2.7	3
34	Shape Design From Exemplar Sketches Using Graph-Based Sketch Analysis. Journal of Mechanical Design, Transactions of the ASME, 2012, 134, .	2.9	7
35	Sketch-based surface design using malleable curve networks. Computers and Graphics, 2012, 36, 916-929.	2.5	11
36	Feature, design intention and constraint preservation for direct modeling of 3D freeform surfaces. 3D Research, 2012, 3, 1.	1.8	1

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37	Sketch-based aesthetic product form exploration from existing images using piecewise clothoid curves. Journal of Visual Languages and Computing, 2012, 23, 327-339.	1.8	6
38	Conceptual design and modification of freeform surfaces using dual shape representations in augmented reality environments. CAD Computer Aided Design, 2012, 44, 1020-1032.	2.7	58
39	Surface creation on unstructured point sets using neural networks. CAD Computer Aided Design, 2012, 44, 644-656.	2.7	8
40	Beautification of Design Sketches Using Trainable Stroke Clustering and Curve Fitting. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 694-708.	4.4	50
41	Neural network-based symbol recognition using a few labeled samples. Computers and Graphics, 2011, 35, 955-966.	2.5	11
42	Computer-Aided Patient-Specific Coronary Artery Graft Design Improvements Using CFD Coupled Shape Optimizer. Cardiovascular Engineering and Technology, 2011, 2, 35-47.	1.6	48
43	From engineering diagrams to engineering models: Visual recognition and applications. CAD Computer Aided Design, 2011, 43, 278-292.	2.7	39
44	Sketch-based modeling of smooth surfaces using adaptive curve networks. , 2011, , .		9
45	<i>AI EDAM</i> Special Issue, August 2012, Vol. 26, No. 3. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2011, 25, 305-305.	1.1	0
46	The Creation and Modification of 3D Models Using Sketches and Curves. , 2011, , 341-367.		1
47	Improving Problem Solving Performance by Inducing Talk about Salient Problem Features. Journal of Engineering Education, 2010, 99, 135-142.	3.0	37
48	Learning Geometric Design Knowledge From Conceptual Sketches and Its Utilization in Shape Creation and Optimization. , 2009, , .		2
49	Recognizing Network-Like Hand-Drawn Sketches: A Convolutional Neural Network Approach. , 2009, , .		5
50	Supporting Early Styling Design of Automobiles Using Sketch-based 3D Shape Construction. Computer-Aided Design and Applications, 2008, 5, 867-876.	0.6	18
51	A Sketch-Based Tool for Analyzing Vibratory Mechanical Systems. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, .	2.9	21
52	Sketch-Based 3D-Shape Creation for Industrial Styling Design. IEEE Computer Graphics and Applications, 2007, 27, 60-71.	1.2	78
53	An evaluation of user experience with a sketch-based 3D modeling system. Computers and Graphics, 2007, 31, 580-597.	2.5	15
54	An efficient graph-based recognizer for hand-drawn symbols. Computers and Graphics, 2007, 31, 554-567.	2.5	37

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55	Pen-based styling design of 3D geometry using concept sketches and template models. , 2006, , .		46
56	An image-based, trainable symbol recognizer for hand-drawn sketches. Computers and Graphics, 2005, 29, 501-517.	2.5	120
57	Combining geometry and domain knowledge to interpret hand-drawn diagrams. Computers and Graphics, 2005, 29, 547-562.	2.5	84
58	Hierarchical parsing and recognition of hand-sketched diagrams. , 2004, , .		71
59	A Sketch-Based Interface for the Design and Analysis of Simple Vibratory Mechanical Systems. , 2004, , .		15
60	Causal reasoning using geometric analysis. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2002, 16, 363-384.	1.1	2
61	A representation for comparing simulations and computing the purpose of geometric features. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2001, 15, 189-201.	1.1	5