# Levent Burak Kara

List of Publications by Year
in descending order

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

| # | ARTICLE | IF | CITATIONS |
|---|---------|----|-----------|
| 1 | An image-based, trainable symbol recognizer for hand-drawn sketches. Computers and Graphics, 2005, 29, 501-517. | 2.5 | 120 |
| 2 | Semantic shape editing using deformation handles. ACM Transactions on Graphics, 2015, 34, 1-12. | 7.2 | 100 |
| 3 | 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 |
| 4 | Stress Field Prediction in Cantilevered Structures Using Convolutional Neural Networks. Journal of Computing and Information Science in Engineering, 2020, 20, . | 2.7 | 96 |
| 5 | Combining geometry and domain knowledge to interpret hand-drawn diagrams. Computers and Graphics, 2005, 29, 547-562. | 2.5 | 84 |
| 6 | 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 |
| 7 | Sketch-Based 3D-Shape Creation for Industrial Styling Design. IEEE Computer Graphics and Applications, 2007, 27, 60-71. | 1.2 | 78 |
| 8 | Hierarchical parsing and recognition of hand-sketched diagrams. , 2004, , . | | 71 |
| 9 | 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 |
| 10 | 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 |
| 11 | 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 |
| 12 | 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 |
| 13 | StressGAN: A Generative Deep Learning Model for Two-Dimensional Stress Distribution Prediction. Journal of Applied Mechanics, Transactions ASME, 2021, 88, . | 2.2 | 47 |
| 14 | Pen-based styling design of 3D geometry using concept sketches and template models. , 2006, , . | | 46 |
| 15 | A Deep Reinforcement Learning Approach for Global Routing. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, . | 2.9 | 46 |
| 16 | Co-abstraction of shape collections. ACM Transactions on Graphics, 2012, 31, 1-11. | 7.2 | 44 |
| 17 | From engineering diagrams to engineering models: Visual recognition and applications. CAD Computer Aided Design, 2011, 43, 278-292. | 2.7 | 39 |
| 18 | An efficient graph-based recognizer for hand-drawn symbols. Computers and Graphics, 2007, 31, 554-567. | 2.5 | 37 |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 19 | Improving Problem Solving Performance by Inducing Talk about Salient Problem Features. Journal of Engineering Education, 2010, 99, 135-142. | 3.0 | 37 |
| 20 | 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 |
| 21 | Co-constrained handles for deformation in shape collections. ACM Transactions on Graphics, 2014, 33, 1-11. | 7.2 | 25 |
| 22 | Concurrent Structure and Process Optimization for Minimum Cost Metal Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, . | 2.9 | 23 |
| 23 | A Sketch-Based Tool for Analyzing Vibratory Mechanical Systems. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, . | 2.9 | 21 |
| 24 | 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 |
| 25 | Supporting Early Styling Design of Automobiles Using Sketch-based 3D Shape Construction. Computer-Aided Design and Applications, 2008, 5, 867-876. | 0.6 | 18 |
| 26 | An evaluation of user experience with a sketch-based 3D modeling system. Computers and Graphics, 2007, 31, 580-597. | 2.5 | 15 |
| 27 | A Sketch-Based Interface for the Design and Analysis of Simple Vibratory Mechanical Systems. , 2004, , . |  | 15 |
| 28 | 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 |
| 29 | Data-driven Upsampling of Point Clouds. CAD Computer Aided Design, 2019, 112, 1-13. | 2.7 | 14 |
| 30 | Neural network-based symbol recognition using a few labeled samples. Computers and Graphics, 2011, 35, 955-966. | 2.5 | 11 |
| 31 | Sketch-based surface design using malleable curve networks. Computers and Graphics, 2012, 36, 916-929. | 2.5 | 11 |
| 32 | Sketch-based modeling of smooth surfaces using adaptive curve networks. , 2011, , . |  | 9 |
| 33 | Surface creation on unstructured point sets using neural networks. CAD Computer Aided Design, 2012, 44, 644-656. | 2.7 | 8 |
| 34 | DMS2015-33: Generative interface structure design for supporting existing objects. Journal of Visual Languages and Computing, 2015, 31, 171-183. | 1.8 | 8 |
| 35 | Shape Design From Exemplar Sketches Using Graph-Based Sketch Analysis. Journal of Mechanical Design, Transactions of the ASME, 2012, 134, . | 2.9 | 7 |
| 36 | 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 |

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|---|---------|-----|-----------|
| 37 | Designing coupling behaviors using compliant shape optimization. CAD Computer Aided Design, 2018, 101, 57-71. | 2.7 | 6 |
| 38 | 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 |
| 39 | Recognizing Network-Like Hand-Drawn Sketches: A Convolutional Neural Network Approach. , 2009, , . | | 5 |
| 40 | Recognizing planar kinematic mechanisms from a single image using evolutionary computation. , 2014, , . | | 5 |
| 41 | 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 |
| 42 | Intermodal image-based recognition of planar kinematic mechanisms. Journal of Visual Languages and Computing, 2015, 27, 38-48. | 1.8 | 5 |
| 43 | 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 |
| 44 | Computer tutors can address students learning to solve complex engineering problems. , 2014, , . | | 4 |
| 45 | Modeling flow features with user-guided streamline parameterization. CAD Computer Aided Design, 2014, 46, 263-268. | 2.7 | 4 |
| 46 | 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 |
| 47 | 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 |
| 48 | A Data-Driven Investigation and Estimation of Optimal Topologies under Variable Loading Configurations. Lecture Notes in Computer Science, 2014, , 387-399. | 1.3 | 3 |
| 49 | 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 |
| 50 | Wisdom of Microcrowds in Evaluating Solutions to Esoteric Engineering Problems. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, . | 2.9 | 3 |
| 51 | Causal reasoning using geometric analysis. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2002, 16, 363-384. | 1.1 | 2 |
| 52 | Learning Geometric Design Knowledge From Conceptual Sketches and Its Utilization in Shape Creation and Optimization. , 2009, , . | | 2 |
| 53 | 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 |
| 54 | 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 |

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|---|---------|-----|-----------|
| 55 | Sketching and pen-based design interaction. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2012, 26, 241-243. | 1.1 | 1 |
| 56 | Feature, design intention and constraint preservation for direct modeling of 3D freeform surfaces. 3D Research, 2012, 3, 1. | 1.8 | 1 |
| 57 | 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 |
| 58 | The Creation and Modification of 3D Models Using Sketches and Curves. , 2011, , 341-367. | | 1 |
| 59 | <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 |
| 60 | 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 |
| 61 | Predictive Modeling for 2D Form Design. Lecture Notes in Computer Science, 2014, , 286-291. | 1.3 | 0 |