In Gwun Jang

List of Publications by Year
in descending order

56 papers	1,090 citations	430874 18 h-index	434195 31 g-index
56 all docs	56 docs citations	56 times ranked	859 citing authors

#	Article	IF	Citations
1	Deep learning for determining a near-optimal topological design without any iteration. Structural and Multidisciplinary Optimization, 2019, 59, 787-799.	3.5	199
2	Computational study of Wolff's law with trabecular architecture in the human proximal femur using topology optimization. Journal of Biomechanics, 2008, 41, 2353-2361.	2.1	124
3	Computational simulation of simultaneous cortical and trabecular bone change in human proximal femur during bone remodeling. Journal of Biomechanics, 2010, 43, 294-301.	2.1	55
4	Analogy of Strain Energy Density Based Bone-Remodeling Algorithm and Structural Topology Optimization. Journal of Biomechanical Engineering, 2009, 131, 011012.	1.3	48
5	Pattern design of a non-pneumatic tyre for stiffness using topology optimization. Engineering Optimization, 2012, 44, 119-131.	2.6	40
6	Evolutionary topology optimization using design space adjustment based on fixed grid. International Journal for Numerical Methods in Engineering, 2006, 66, 1817-1840.	2.8	36
7	Traffic Signal Optimization for Oversaturated Urban Networks: Queue Growth Equalization. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 2121-2128.	8.0	34
8	Application of design space optimization to bone remodeling simulation of trabecular architecture in human proximal femur for higher computational efficiency. Finite Elements in Analysis and Design, 2010, 46, 311-319.	3.2	33
9	Computational simulation of trabecular adaptation progress in human proximal femur during growth. Journal of Biomechanics, 2009, 42, 573-580.	2.1	32
10	Fully automated segmentation of a hip joint using the patient-specific optimal thresholding and watershed algorithm. Computer Methods and Programs in Biomedicine, 2018, 154, 161-171.	4.7	28
11	Simulation-Based Feasibility Study on the Wireless Charging Railway System With a Ferriteless Primary Module. IEEE Transactions on Vehicular Technology, 2017, 66, 1004-1010.	6.3	26
12	Topology optimization for a frequency response and its application to a violin bridge. Structural and Multidisciplinary Optimization, 2013, 48, 627-636.	3.5	24
13	Conceptual and basic designs of the Mobile Harbor crane based on topology and shape optimization. Structural and Multidisciplinary Optimization, 2014, 50, 505-515.	3.5	23
14	Developing Accurate Long Distance 6-DOF Motion Detection with 1-D Laser Sensors: Three-Beam Detection System. IEEE Transactions on Industrial Electronics, 2012, , 1-1.	7.9	21
15	Design space optimization using design space adjustment and refinement. Structural and Multidisciplinary Optimization, 2007, 35, 41-54.	3.5	20
16	Image resolution enhancement for healthy weight-bearing bones based on topology optimization. Journal of Biomechanics, 2016, 49, 3035-3040.	2.1	20
17	Numerical predictions of the interaction between highly nonlinear solitary waves and the microstructure of trabecular bone in the femoral head. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 109, 103805.	3.1	20
18	Computational study on the effect of loading alteration caused by disc degeneration on the trabecular architecture in human lumbar spine. Journal of Biomechanics, 2010, 43, 492-499.	2.1	19

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19	Layout Optimization of the Receiver Coils for Multitransmitter Wireless Power Transfer Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 1311-1321.	5.4	18
20	Development of the Optimization Framework for Low-Power Wireless Power Transfer Systems. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 813-820.	4.6	17
21	Computational study of estimating 3D trabecular bone microstructure for the volume of interest from CT scan data. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2950.	2.1	17
22	Patient-Specific Phantomless Estimation of Bone Mineral Density and Its Effects on Finite Element Analysis Results: A Feasibility Study. Computational and Mathematical Methods in Medicine, 2019, 2019, 1-10.	1.3	17
23	Adaptive Equivalent Consumption Minimization Strategy (A-ECMS) for the HEVs With a Near-Optimal Equivalent Factor Considering Driving Conditions. IEEE Transactions on Vehicular Technology, 2022, 71, 2538-2549.	6.3	17
24	Nodal line optimization and its application to violin top plate design. Journal of Sound and Vibration, 2010, 329, 4785-4796.	3.9	16
25	Homeostasis-based aging model for trabecular changes and its correlation with age-matched bone mineral densities and radiographs. European Journal of Radiology, 2015, 84, 2261-2268.	2.6	16
26	Topology optimization of multiple-barrier synchronous reluctance motors with initial random hollow circles. Structural and Multidisciplinary Optimization, 2021, 64, 2213-2224.	3.5	15
27	Coil Layout Optimization for Maximizing the Power Transfer Efficiency of Wireless Power Transfer Systems With Multiple Transmitter Coils. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 2672-2681.	5.4	12
28	Structural Optimization of a Novel 6-DOF Pose Sensor System for Enhancing Noise Robustness at a Long Distance. IEEE Transactions on Industrial Electronics, 2014, 61, 5622-5631.	7.9	11
29	Topology Optimization for the Manufacturable and Structurally Safe Synchronous Reluctance Motors With Multiple Iron Webs and Bridges. IEEE Transactions on Industrial Electronics, 2023, 70, 678-687.	7.9	11
30	Determination of the Optimal Resonant Condition for Multireceiver Wireless Power Transfer Systems Considering the Transfer Efficiency and Different Rated Powers With Altered Coupling Effects. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 2384-2393.	5.4	10
31	Predictions of the elastic modulus of trabecular bone in the femoral head and the intertrochanter: a solitary wave-based approach. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1733-1749.	2.8	10
32	Estimation of Local Bone Loads for the Volume of Interest. Journal of Biomechanical Engineering, 2016, 138, .	1.3	8
33	Precise Determination of the Optimal Coil for Wireless Power Transfer Systems Through Postprocessing in the Smooth Boundary Representation. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	8
34	Multi-resolution topology optimization using adaptive isosurface variable grouping (MTOP-aIVG) for enhanced computational efficiency. Structural and Multidisciplinary Optimization, 2021, 63, 1743-1766.	3.5	8
35	Integrated topology and shape optimization of the five-spoke steel wheel to improve the natural frequency. Structural and Multidisciplinary Optimization, 2022, 65, 1.	3.5	8
36	Design improvement of the three-beam detector towards a precise long-range 6-degree of freedom motion sensor system. Review of Scientific Instruments, 2014, 85, 015004.	1.3	7

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37	Shape optimization-based design investigation of the switched reluctance motors regarding the target torque and current limitation. Structural and Multidisciplinary Optimization, 2021, 64, 859.	3.5	7
38	Layout optimization of the secondary coils for wireless power transfer systems. , 2015, , .		6
39	Site-Specific Quality Assessment of Trabecular Bone Using Highly Nonlinear Solitary Waves. Lecture Notes in Civil Engineering, 2021, , 893-901.	0.4	6
40	Determination of the representative static loads for cyclically repeated dynamic loads: a case study of bone remodeling simulation with gait loads. Computer Methods and Programs in Biomedicine, 2021, 200, 105924.	4.7	6
41	Evaluating the Maximum Directional Kinematic Capability of a Redundant Manipulator Based on Allowable Velocity and Force. IEEE Access, 2021, 9, 88085-88097.	4.2	5
42	Lightweight Design of a Bulk Trailer Using Topology Optimization. Transactions of the Korean Society of Automotive Engineers, 2017, 25, 548-554.	0.3	5
43	Unit Module-Based Convergence Acceleration for Topology Optimization Using the Spatiotemporal Deep Neural Network. IEEE Access, 2021, 9, 149766-149779.	4.2	5
44	Auto-positioning of sliding planes based on virtual force. International Journal of Control, Automation and Systems, 2013, 11, 798-804.	2.7	4
45	An advanced cargo handling system operating at sea. International Journal of Control, Automation and Systems, 2014, 12, 852-860.	2.7	4
46	Model-Predictive-Control-Based Time-Optimal Trajectory Planning of the Distributed Actuation Mechanism Augmented by the Maximum Performance Evaluation. Applied Sciences (Switzerland), 2021, 11, 7513.	2.5	3
47	Lightweight Design of the Stub Axle Using Topology Optimization. Journal of the Korean Society for Precision Engineering, 2018, 35, 695-700.	0.2	3
48	Development of the optimization framework for wireless power transfer systems. , 2014, , .		2
49	Optimization-Based Investigation of Bioinspired Variable Gearing of the Distributed Actuation Mechanism to Maximize Velocity and Force. IEEE Robotics and Automation Letters, 2020, 5, 6326-6333.	5.1	2
50	Multidimensional Scaling Analysis of Inter-regional Public Transit Services: Focusing on Inter-regional Railways. Journal of the Korean Society for Railway, 2016, 19, 243-250.	0.1	2
51	Topology optimization for a frequency response and its application to a violin bridge. , 2013, 48, 627.		1
52	Deep learning for determining a near-optimal topological design without any iteration. , 2019, 59, 787.		1
53	Computational Simulation for Trabecular Adaptation in Human Proximal Femur Using Design Space Optimization. , 2008, , .		0
54	Optimal Layout of an Offshore Crane Using Topology Optimization. , 2012, , .		0

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55	Determination of the Optimal Resonant Condition for Multi-Receiver Wireless Power Transfer Systems. , 2019, , .		0
56	1C14 Development of an auto-positioning spreader for Mobile Harbor. The Proceedings of the Symposium on the Motion and Vibration Control, 2010, 2010, _1C14-1_-_1C14-7_.	0.0	0