

# Daniel Baum

## List of Publications by Year in descending order

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Version: 2024-02-01

48  
papers

1,374  
citations

430874

18  
h-index

361022

35  
g-index

52  
all docs

52  
docs citations

52  
times ranked

1901  
citing authors

#	ARTICLE	IF	CITATIONS
1	Automated segmentation of electron tomograms for a quantitative description of actin filament networks. <i>Journal of Structural Biology</i> , 2012, 177, 135-144.	2.8	186
2	Membrane Protein Structure, Function, and Dynamics: a Perspective from Experiments and Theory. <i>Journal of Membrane Biology</i> , 2015, 248, 611-640.	2.1	157
3	4D imaging of lithium-batteries using correlative neutron and X-ray tomography with a virtual unrolling technique. <i>Nature Communications</i> , 2020, 11, 777.	12.8	104
4	Automated tracing of microtubules in electron tomograms of plastic embedded samples of <i>Caenorhabditis elegans</i> embryos. <i>Journal of Structural Biology</i> , 2012, 178, 129-138.	2.8	101
5	In-Situ Defect Detection in Laser Powder Bed Fusion by Using Thermography and Optical Tomography—Comparison to Computed Tomography. <i>Metals</i> , 2020, 10, 103.	2.3	90
6	Visualization of Biomolecular Structures: State of the Art Revisited. <i>Computer Graphics Forum</i> , 2017, 36, 178-204.	3.0	69
7	Aggradation and carbonate accumulation of Holocene Norwegian cold-water coral reefs. <i>Sedimentology</i> , 2015, 62, 1873-1898.	3.1	54
8	Voronoi-Based Extraction and Visualization of Molecular Paths. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2011, 17, 2025-2034.	4.4	49
9	Visual Analysis of Biomolecular Cavities: State of the Art. <i>Computer Graphics Forum</i> , 2016, 35, 527-551.	3.0	46
10	Accelerated Visualization of Dynamic Molecular Surfaces. <i>Computer Graphics Forum</i> , 2010, 29, 943-952.	3.0	42
11	Mediterranean cold-water corals – an important regional carbonate factory?. <i>Depositional Record</i> , 2016, 2, 74-96.	1.7	39
12	Exploring cavity dynamics in biomolecular systems. <i>BMC Bioinformatics</i> , 2013, 14, S5.	2.6	38
13	Interactive Rendering of Materials and Biological Structures on Atomic and Nanoscopic Scale. <i>Computer Graphics Forum</i> , 2012, 31, 1325-1334.	3.0	34
14	Automated Stitching of Microtubule Centerlines across Serial Electron Tomograms. <i>PLoS ONE</i> , 2014, 9, e113222.	2.5	31
15	The Segmentation of Microtubules in Electron Tomograms Using Amira. <i>Methods in Molecular Biology</i> , 2014, 1136, 261-278.	0.9	29
16	Long-term macrobioerosion in the Mediterranean Sea assessed by micro-computed tomography. <i>Biogeosciences</i> , 2016, 13, 3461-3474.	3.3	21
17	Dynamic channels in biomolecular systems: Path analysis and visualization. , 2012, , .		20
18	Co-aligned chondrocytes: Zonal morphological variation and structured arrangement of cell lacunae in tessellated cartilage. <i>Bone</i> , 2020, 134, 115264.	2.9	20

#	ARTICLE	IF	CITATIONS
19	Revealing hidden text in rolled and folded papyri. <i>Applied Physics A: Materials Science and Processing</i> , 2017, 123, 1.	2.3	19
20	Semi-automatic stitching of filamentous structures in image stacks from serial-section electron tomography. <i>Journal of Microscopy</i> , 2021, 284, 25-44.	1.8	18
21	High-Throughput Segmentation of Tiled Biological Structures using Random-Walk Distance Transforms. <i>Integrative and Comparative Biology</i> , 2019, 59, 1700-1712.	2.0	16
22	Ligand Excluded Surface: A New Type of Molecular Surface. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2014, 20, 2486-2495.	4.4	14
23	Two new species of erect Bryozoa (Gymnolaemata: Cheilostomata) and the application of non-destructive imaging methods for quantitative taxonomy. <i>Zootaxa</i> , 2015, 4020, 81-100.	0.5	14
24	Virtual unfolding of folded papyri. <i>Journal of Cultural Heritage</i> , 2020, 41, 264-269.	3.3	12
25	Ambient occlusion – A powerful algorithm to segment shell and skeletal intrapores in computed tomography data. <i>Computers and Geosciences</i> , 2018, 115, 75-87.	4.2	11
26	Interactive Visualization of RNA and DNA Structures. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2019, 25, 967-976.	4.4	11
27	Exposure to Odors Increases Pain Threshold in Chronic Low Back Pain Patients. <i>Pain Medicine</i> , 2020, 21, 2546-2551.	1.9	11
28	Non-sexual abdominal appendages in adult insects challenge a 300 million year old bauplan. <i>Current Biology</i> , 2014, 24, R16-R17.	3.9	10
29	Perceptually Linear Parameter Variations. <i>Computer Graphics Forum</i> , 2012, 31, 535-544.	3.0	9
30	Registering 2D and 3D imaging data of bone during healing. <i>Connective Tissue Research</i> , 2015, 56, 133-143.	2.3	9
31	Dust and gas emission from cometary nuclei: the case of comet 67P/Churyumov-Gerasimenko. <i>Advances in Physics: X</i> , 2018, 3, 1404436.	4.1	8
32	Muscle internal structure revealed by contrast-enhanced $\mu$ CT and fibre recognition: The hindlimb extensors of an arboreal and a fossorial squirrel. <i>Mammalian Biology</i> , 2019, 99, 71-80.	1.5	8
33	Multiple Semi-flexible 3D Superposition of Drug-Sized Molecules. <i>Lecture Notes in Computer Science</i> , 2005, , 198-207.	1.3	8
34	Comparative Visual Analysis of Structure-Performance Relations in Complex Bulk-Heterojunction Morphologies. <i>Computer Graphics Forum</i> , 2017, 36, 329-339.	3.0	7
35	Automated segmentation of complex patterns in biological tissues: Lessons from stingray tessellated cartilage. <i>PLoS ONE</i> , 2017, 12, e0188018.	2.5	7
36	Definition, Extraction, and Validation of Pore Structures in Porous Materials. <i>Mathematics and Visualization</i> , 2014, , 235-248.	0.6	7

#	ARTICLE	IF	CITATIONS
37	Scattering and phase-contrast X-ray methods reveal damage to glass fibers in endodontic posts following dental bur trimming. <i>Dental Materials</i> , 2021, 37, 201-211.	3.5	6
38	A Point-Matching Based Algorithm for 3D Surface Alignment of Drug-Sized Molecules. <i>Lecture Notes in Computer Science</i> , 2006, , 183-193.	1.3	6
39	A comparative description of the mesosomal musculature in Sphecidae and Ampulicidae (Hymenoptera,) <i>Tj ETQq1 1 0.784314 rgBT / 0</i> <i>Entomologische Zeitschrift</i> , 2020, 67, 51-67.	0.8	6
40	A Novel Framework for Visual Detection and Exploration of Performance Bottlenecks in Organic Photovoltaic Solar Cell Materials. <i>Computer Graphics Forum</i> , 2015, 34, 401-410.	3.0	5
41	Adapting trabecular structures for 3D printing: an image processing approach based on $\hat{1}/4$ CT data. <i>Biomedical Physics and Engineering Express</i> , 2017, 3, 035027.	1.2	2
42	Dâ€™Arcy W. Thompsonâ€™s Cartesian transformations: a critical evaluation. <i>Zoomorphology</i> , 2020, 139, 293-308.	0.8	2
43	Ontogeny of a tessellated surface: Carapace growth of the longhorn cowfish <i>Lactoria cornuta</i> . <i>Journal of Anatomy</i> , 0, , .	1.5	2
44	Anisotropic Sampling of Planar and Two-Manifold Domains for Texture Generation and Glyph Distribution. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2013, 19, 1782-1794.	4.4	1
45	Image analysis pipeline for segmentation of a biological porosity network, the lacuno-canalicular system in stingray tesserae. <i>MethodsX</i> , 2020, 7, 100905.	1.6	1
46	Adapting spherical-harmonics-based geometric morphometrics (SPHARM) for 3D images containing large cavity openings using ambient occlusion: a study with hermit crab claw shape variability. <i>Zoomorphology</i> , 2020, 139, 421-432.	0.8	1
47	Thinâ€™Volume Visualization on Curved Domains. <i>Computer Graphics Forum</i> , 2021, 40, 147-157.	3.0	1
48	Revisiting the Jerash Silver Scroll: A new visual data analysis approach. <i>Digital Applications in Archaeology and Cultural Heritage</i> , 2021, 21, e00186.	1.3	1