

Igor Sazonov

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/806434/publications.pdf>

Version: 2024-02-01

41
papers

576
citations

623734

14
h-index

677142

22
g-index

42
all docs

42
docs citations

42
times ranked

527
citing authors

#	ARTICLE	IF	CITATIONS
1	Estimating the accuracy of a reduced-order model for the calculation of fractional flow reserve (FFR). <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018, 34, e2908.	2.1	54
2	Towards enabling a cardiovascular digital twin for human systemic circulation using inverse analysis. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021, 20, 449-465.	2.8	51
3	A semi-active human digital twin model for detecting severity of carotid stenoses from head vibration – A coupled computational mechanics and computer vision method. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2019, 35, e3180.	2.1	48
4	A stitching method for the generation of unstructured meshes for use with co-volume solution techniques. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 1826-1845.	6.6	40
5	Modelling pipeline for subject-specific arterial blood flow – A review. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2011, 27, 1868-1910.	2.1	34
6	A novel method for non-invasively detecting the severity and location of aortic aneurysms. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 1225-1242.	2.8	28
7	Geometrically Induced Force Interaction for Three-Dimensional Deformable Models. <i>IEEE Transactions on Image Processing</i> , 2011, 20, 1373-1387.	9.8	27
8	The Speed of Epidemic Waves in a One-Dimensional Lattice of SIR Models. <i>Mathematical Modelling of Natural Phenomena</i> , 2008, 3, 28-47.	2.4	24
9	Segmentation of biomedical images using active contour model with robust image feature and shape prior. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2014, 30, 232-248.	2.1	23
10	Semi-automatic surface and volume mesh generation for subject-specific biomedical geometries. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2012, 28, 133-157.	2.1	21
11	Modeling of the HIV-1 Life Cycle in Productively Infected Cells to Predict Novel Therapeutic Targets. <i>Pathogens</i> , 2020, 9, 255.	2.8	18
12	A two-stage model for the SIR outbreak: Accounting for the discrete and stochastic nature of the epidemic at the initial contamination stage. <i>Mathematical Biosciences</i> , 2011, 234, 108-117.	1.9	16
13	Intracellular Life Cycle Kinetics of SARS-CoV-2 Predicted Using Mathematical Modelling. <i>Viruses</i> , 2021, 13, 1735.	3.3	15
14	Patient-specific blood flow simulation through an aneurysmal thoracic aorta with a folded proximal neck. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2011, 27, 1167-1184.	2.1	14
15	Flow-induced ATP release in patient-specific arterial geometries – a comparative study of computational models. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2013, 29, 1038-1056.	2.1	13
16	Graph Theory for Modeling and Analysis of the Human Lymphatic System. <i>Mathematics</i> , 2020, 8, 2236.	2.2	11
17	Markov Chain-Based Stochastic Modelling of HIV-1 Life Cycle in a CD4 T Cell. <i>Mathematics</i> , 2021, 9, 2025.	2.2	11
18	Critical Issues in Modelling Lymph Node Physiology. <i>Computation</i> , 2017, 5, 3.	2.0	10

#	ARTICLE	IF	CITATIONS
19	Artificial intelligence approaches to predict coronary stenosis severity using non-invasive fractional flow reserve. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2020, 234, 1337-1350.	1.8	9
20	Geometric Potential Force for the Deformable Model. , 2009, , .		9
21	Generating the Voronoi-Delaunay Dual Diagram for Co-Volume Integration Schemes. , 2007, , .		8
22	Travelling waves in a network of SIR epidemic nodes with an approximation of weak coupling. Mathematical Medicine and Biology, 2011, 28, 165-183.	1.2	8
23	Numerical Prediction of Heat Transfer Patterns in a Subject-Specific Human Upper Airway. Journal of Heat Transfer, 2012, 134, .	2.1	8
24	A novel, FFT-based one-dimensional blood flow solution method for arterial network. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1311-1334.	2.8	8
25	Influences of domain extensions to a moderately stenosed patient-specific carotid bifurcation. International Journal of Numerical Methods for Heat and Fluid Flow, 2011, 21, 952-979.	2.8	7
26	Viral Infection Dynamics Model Based on a Markov Process with Time Delay between Cell Infection and Progeny Production. Mathematics, 2020, 8, 1207.	2.2	7
27	Smooth Delaunay-Voronoi Dual Meshes for Co-Volume Integration Schemes. , 2006, , 529-541.		7
28	Integrated geometric and mechanical analysis of an image-based lymphatic valve. Journal of Biomechanics, 2017, 64, 172-179.	2.1	6
29	Quasi-modes in boundary-layer-type flows. Part 2. Large-time asymptotics of broadband inviscid small-amplitude two-dimensional perturbations. Journal of Fluid Mechanics, 2003, 488, 245-282.	3.4	3
30	Random migration processes between two stochastic epidemic centers. Mathematical Biosciences, 2016, 274, 45-57.	1.9	3
31	A novel modelling approach to energy transport in a respiratory system. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, e2854.	2.1	3
32	Sensitivity of SARS-CoV-2 Life Cycle to IFN Effects and ACE2 Binding Unveiled with a Stochastic Model. Viruses, 2022, 14, 403.	3.3	3
33	Automating fractional flow reserve (FFR) calculation from CT scans: A rapid workflow using unsupervised learning and computational fluid dynamics. International Journal for Numerical Methods in Biomedical Engineering, 2022, 38, e3559.	2.1	3
34	Critical reaction time during a disease outbreak. Ecological Complexity, 2011, 8, 326-335.	2.9	2
35	Comparison of Two Explicit Time Domain Unstructured Mesh Algorithms for Computational Electromagnetics. Computational Methods in Applied Sciences (Springer), 2008, , 95-112.	0.3	2
36	Image Gradient Based Level Set Methods in 2D and 3D. Lecture Notes in Computational Vision and Biomechanics, 2013, , 101-120.	0.5	1

#	ARTICLE	IF	CITATIONS
37	An improved method of computing geometrical potential force (GPF) employed in the segmentation of 3D and 4D medical images. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2017, 5, 287-296.	1.9	1
38	Scan-Based Flow Modelling in Human Upper Airways. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2011, , 241-280.	1.0	0
39	Extracting 3D Structures from Biomedical Data. , 2011, , .		0
40	Segmenting Carotid in CT Using Geometric Potential Field Deformable Model. Springer Proceedings in Mathematics and Statistics, 2013, , 149-162.	0.2	0
41	Efficient Geometrical Potential Force Computation for Deformable Model Segmentation. Lecture Notes in Computer Science, 2013, , 104-113.	1.3	0