

Alessandro Veneziani

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

77
papers

2,694
citations

26
h-index

50
g-index

80
ext. papers

3,097
ext. citations

3.1
avg, IF

5.21
L-index

#	Paper	IF	Citations
77	Global Sensitivity Analysis for Patient-Specific Aortic Simulations: The Role of Geometry, Boundary Condition and Large Eddy Simulation Modeling Parameters. <i>Journal of Biomechanical Engineering</i> , 2021 , 143,	2.1	2
76	Simulating the spread of COVID-19 a spatially-resolved susceptible-exposed-infected-recovered-deceased (SEIRD) model with heterogeneous diffusion. <i>Applied Mathematics Letters</i> , 2021 , 111, 106617	3.5	74
75	A multi-domain shear-stress dependent diffusive model of cell transport-aided dialysis: analysis and simulation. <i>Mathematical Biosciences and Engineering</i> , 2021 , 18, 8188-8200	2.1	
74	Efficient estimation of cardiac conductivities: A proper generalized decomposition approach. <i>Journal of Computational Physics</i> , 2020 , 423, 109810	4.1	13
73	Fluid-Structure Interaction Simulation of an Intra-Atrial Fontan Connection. <i>Biology</i> , 2020 , 9,	4.9	8
72	Diffusion-reaction compartmental models formulated in a continuum mechanics framework: application to COVID-19, mathematical analysis, and numerical study. <i>Computational Mechanics</i> , 2020 , 66, 1-22	4	32
71	Experimental validation of a variational data assimilation procedure for estimating space-dependent cardiac conductivities. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020 , 358, 112615	5.7	23
70	Propagating uncertainties in large-scale hemodynamics models via network uncertainty quantification and reduced-order modeling. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020 , 358, 112626	5.7	13
69	Analysis of Inlet Velocity Profiles in Numerical Assessment of Fontan Hemodynamics. <i>Annals of Biomedical Engineering</i> , 2019 , 47, 2258-2270	4.7	16
68	Deconvolution-based stabilization of the incompressible Navier-Stokes equations. <i>Journal of Computational Physics</i> , 2019 , 391, 226-242	4.1	1
67	The effect of respiration-driven flow waveforms on hemodynamic metrics used in Fontan surgical planning. <i>Journal of Biomechanics</i> , 2019 , 82, 87-95	2.9	13
66	Coupled Morphological-Hemodynamic Computational Analysis of Type B Aortic Dissection: A Longitudinal Study. <i>Annals of Biomedical Engineering</i> , 2018 , 46, 927-939	4.7	25
65	Patient-specific CFD modelling in the thoracic aorta with PC-MRI-based boundary conditions: A least-square three-element Windkessel approach. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018 , 34, e3134	2.6	26
64	Hierarchical model reduction for incompressible fluids in pipes. <i>International Journal for Numerical Methods in Engineering</i> , 2018 , 114, 469-500	2.4	11
63	Numerical methods for polyline-to-point-cloud registration with applications to patient-specific stent reconstruction. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018 , 34, e2934	2.6	2
62	HiMod Reduction of Advection-Diffusion-Reaction Problems with General Boundary Conditions. <i>Journal of Scientific Computing</i> , 2018 , 76, 89-119	2.3	11
61	High Coronary Shear Stress in Patients With Coronary Artery Disease Predicts Myocardial Infarction. <i>Journal of the American College of Cardiology</i> , 2018 , 72, 1926-1935	15.1	62

60	Low Coronary Wall Shear Stress Is Associated With Severe Endothelial Dysfunction in Patients With Nonobstructive Coronary Artery Disease. <i>JACC: Cardiovascular Interventions</i> , 2018 , 11, 2072-2080	5	30
59	Platform and algorithm effects on computational fluid dynamics applications in life sciences. <i>Future Generation Computer Systems</i> , 2017 , 67, 382-396	7.5	7
58	Transversally enriched pipe element method (TEPEM): An effective numerical approach for blood flow modeling. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2017 , 33, e2808	2.6	10
57	Efficient estimation of cardiac conductivities via POD-DEIM model order reduction. <i>Applied Numerical Mathematics</i> , 2017 , 115, 180-199	2.5	22
56	Numerical sensitivity analysis of a variational data assimilation procedure for cardiac conductivities. <i>Chaos</i> , 2017 , 27, 093930	3.3	12
55	Novel 3-Dimensional Vessel and Scaffold Reconstruction Methodology for the Assessment of Strut-Level Wall Shear Stress After Deployment of Bioresorbable Vascular Scaffolds From the ABSORB III Imaging Substudy. <i>JACC: Cardiovascular Interventions</i> , 2016 , 9, 501-3	5	10
54	Original Research: Sickle cell anemia and pediatric strokes: Computational fluid dynamics analysis in the middle cerebral artery. <i>Experimental Biology and Medicine</i> , 2016 , 241, 755-65	3.7	11
53	Experimental Optimization of Parallel 3D Overlapping Domain Decomposition Schemes. <i>Lecture Notes in Computer Science</i> , 2016 , 138-149	0.9	1
52	A locally anisotropic fluid-structure interaction remeshing strategy for thin structures with application to a hinged rigid leaflet. <i>International Journal for Numerical Methods in Engineering</i> , 2016 , 107, 155-180	2.4	7
51	Vasomotor Function Comparative Assessment at 1 and 2 Years Following Implantation of the Absorb Everolimus-Eluting Bioresorbable Vascular Scaffold and the Xience V Everolimus-Eluting Metallic Stent in Porcine Coronary Arteries: Insights From In Vivo Angiography, Ex Vivo Assessment, and Gene Analysis at the Stented/Scaffolded Segments and the Proximal and Distal Edges. <i>JACC: Cardiovascular Interventions</i> , 2016 , 9, 100-109	5	23
50	A patient-specific follow up study of the impact of thoracic endovascular repair (TEVAR) on aortic anatomy and on post-operative hemodynamics.. <i>Computers and Fluids</i> , 2016 , 141, 54-61	2.8	13
49	Association of Wall Shear Stress with Coronary Plaque Progression and Transformation. <i>Interventional Cardiology Clinics</i> , 2015 , 4, 491-502	1.4	14
48	Surgical planning of the total cavopulmonary connection: robustness analysis. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 1321-34	4.7	17
47	Assessment of a Black-Box Approach for a Parallel Finite Elements Solver in Computational Hemodynamics 2015 ,		2
46	One-Dimensional Surrogate Models for Advection-Diffusion Problems. <i>Lecture Notes in Computational Science and Engineering</i> , 2015 , 447-455	0.3	1
45	Aortic hemodynamics after thoracic endovascular aortic repair, with particular attention to the bird-beak configuration. <i>Journal of Endovascular Therapy</i> , 2014 , 21, 791-802	2.5	26
44	Computational fluid dynamics applied to virtually deployed drug-eluting coronary bioresorbable scaffolds: Clinical translations derived from a proof-of-concept. <i>Global Cardiology Science & Practice</i> , 2014 , 2014, 428-36	0.7	5
43	Coupled Model and Grid Adaptivity in Hierarchical Reduction of Elliptic Problems. <i>Journal of Scientific Computing</i> , 2014 , 60, 505-536	2.3	23

42	Biomechanics and inflammation in atherosclerotic plaque erosion and plaque rupture: implications for cardiovascular events in women. <i>PLoS ONE</i> , 2014 , 9, e111785	3.7	20
41	ALADINS: An ALgebraic splitting time ADaptive solver for the Incompressible Navier-Stokes equations. <i>Journal of Computational Physics</i> , 2013 , 238, 359-375	4.1	15
40	Treatment planning for a TCPC test case: a numerical investigation under rigid and moving wall assumptions. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2013 , 29, 197-216	2.6	18
39	Biomechanical assessment of fully bioresorbable devices. <i>JACC: Cardiovascular Interventions</i> , 2013 , 6, 760-1	5	12
38	Computational Fluid Dynamics Simulations of Hemodynamics in Plaque Erosion. <i>Cardiovascular Engineering and Technology</i> , 2013 , 4, 464	2.2	16
37	Numerical simulation of a susceptible-exposed-infectious space-continuous model for the spread of rabies in raccoons across a realistic landscape. <i>Journal of Biological Dynamics</i> , 2013 , 7 Suppl 1, 31-46	2.4	21
36	An Integrated Statistical Investigation of Internal Carotid Arteries of Patients Affected by Cerebral Aneurysms. <i>Cardiovascular Engineering and Technology</i> , 2012 , 3, 26-40	2.2	28
35	Automatic neck plane detection and 3D geometric characterization of aneurysmal sacs. <i>Annals of Biomedical Engineering</i> , 2012 , 40, 2188-211	4.7	39
34	Experiences with Target-Platform Heterogeneity in Clouds, Grids, and On-Premises Resources 2012		5
33	A Variational Data Assimilation Procedure for the Incompressible Navier-Stokes Equations in Hemodynamics. <i>Journal of Scientific Computing</i> , 2012 , 52, 340-359	2.3	46
32	A Variational Approach for Estimating the Compliance of the Cardiovascular Tissue: An Inverse Fluid-Structure Interaction Problem. <i>SIAM Journal of Scientific Computing</i> , 2011 , 33, 1181-1211	2.6	42
31	Geometry of the internal carotid artery and recurrent patterns in location, orientation, and rupture status of lateral aneurysms: an image-based computational study. <i>Neurosurgery</i> , 2011 , 68, 1270-85; discussion 1285	3.2	40
30	A mixed formulation of the Bingham fluid flow problem: Analysis and numerical solution. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011 , 200, 2434-2446	5.7	15
29	Hierarchical Local Model Reduction for Elliptic Problems: A Domain Decomposition Approach. <i>Multiscale Modeling and Simulation</i> , 2010 , 8, 1102-1127	1.8	35
28	Assisted Fontan procedure: animal and in vitro models and computational fluid dynamics study. <i>Interactive Cardiovascular and Thoracic Surgery</i> , 2010 , 10, 679-84	1.8	10
27	Corrosion detection in a 2D domain with a polygonal boundary. <i>Journal of Inverse and Ill-Posed Problems</i> , 2010 , 18, 281-305	1.3	3
26	Flow rate boundary problems for an incompressible fluid in deformable domains: Formulations and solution methods. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010 , 199, 677-688	5.7	25
25	Womersley number-based estimates of blood flow rate in Doppler analysis: in vivo validation by means of phase-contrast MRI. <i>IEEE Transactions on Biomedical Engineering</i> , 2010 , 57, 1807-15	5	30

24	Womersley number-based estimation of flow rate with Doppler ultrasound: sensitivity analysis and first clinical application. <i>Computer Methods and Programs in Biomedicine</i> , 2010 , 98, 151-60	6.9	10
23	Comparative finite element model analysis of ascending aortic flow in bicuspid and tricuspid aortic valve. <i>Artificial Organs</i> , 2010 , 34, 1114-20	2.6	65
22	A Case Study in Exploratory Functional Data Analysis: Geometrical Features of the Internal Carotid Artery. <i>Journal of the American Statistical Association</i> , 2009 , 104, 37-48	2.8	75
21	A framework for geometric analysis of vascular structures: application to cerebral aneurysms. <i>IEEE Transactions on Medical Imaging</i> , 2009 , 28, 1141-55	11.7	193
20	Expression templates implementation of continuous and discontinuous Galerkin methods. <i>Computing and Visualization in Science</i> , 2009 , 12, 421-436	1	5
19	A 3D/1D geometrical multiscale model of cerebral vasculature. <i>Journal of Engineering Mathematics</i> , 2009 , 64, 319-330	1.2	51
18	Multiscale models of the vascular system 2009 , 395-446		16
17	Reduced models of the cardiovascular system 2009 , 347-394		18
16	A New Approach to Numerical Solution of Defective Boundary Value Problems in Incompressible Fluid Dynamics. <i>SIAM Journal on Numerical Analysis</i> , 2008 , 46, 2769-2794	2.4	40
15	An approximate method for solving incompressible Navier-Stokes problems with flow rate conditions. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2007 , 196, 1685-1700	5.7	35
14	Mathematical and numerical modeling of focal cerebral ischemia. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007 , 7, 2120003-2120004	0.2	
13	A geometrical multiscale approach to the evaluation of hemodynamic risk factors for internal carotid artery aneurysm development.. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007 , 7, 2120013-2120014	0.2	
12	Numerical modeling of 1D arterial networks coupled with a lumped parameters description of the heart. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2006 , 9, 273-88	2.1	129
11	Algebraic fractional-step schemes with spectral methods for the incompressible Navier-Stokes equations. <i>Journal of Computational Physics</i> , 2006 , 214, 347-365	4.1	40
10	Reliable CFD-based estimation of flow rate in haemodynamics measures. <i>Ultrasound in Medicine and Biology</i> , 2006 , 32, 1545-55	3.5	24
9	A fast preconditioner for the incompressible Navier Stokes Equations. <i>Computing and Visualization in Science</i> , 2004 , 6, 105-112	1	15
8	Analysis of a Geometrical Multiscale Model Based on the Coupling of ODE and PDE for Blood Flow Simulations. <i>Multiscale Modeling and Simulation</i> , 2003 , 1, 173-195	1.8	131
7	A Domain Decomposition Method for Advection-Diffusion Processes with Application to Blood Solutes. <i>SIAM Journal of Scientific Computing</i> , 2002 , 23, 1959-1980	2.6	23

6	Mathematical and Numerical Modeling of Solute Dynamics in Blood Flow and Arterial Walls. <i>SIAM Journal on Numerical Analysis</i> , 2002 , 39, 1488-1511	2.4	82
5	Coupling between lumped and distributed models for blood flow problems. <i>Computing and Visualization in Science</i> , 2001 , 4, 111-124	1	97
4	Factorization methods for the numerical approximation of Navier-Stokes equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2000 , 188, 505-526	5.7	120
3	Computational vascular fluid dynamics: problems, models and methods. <i>Computing and Visualization in Science</i> , 2000 , 2, 163-197	1	305
2	Analysis of the Yosida method for the incompressible Navier-Stokes equations. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 1999 , 78, 473-503	1.7	43
1	Multiscale modelling of the circulatory system: a preliminary analysis. <i>Computing and Visualization in Science</i> , 1999 , 2, 75-83	1	188