Chris Cantwell

List of Publications by Year
in descending order

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41 papers	1,502 citations	430874 18 h-index	395702 33 g-index
43 all docs	43 docs citations	43 times ranked	1487 citing authors

#	Article	IF	Citations
1	Nektar++: An open-source spectral/<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si20.gif" display="inline" overflow="scroll"><mml:mi>h</mml:mi><mml:mi>p</mml:mi></mml:math> element framework. Computer Physics Communications, 2015, 192, 205-219.	7.5	399
2	Techniques for automated local activation time annotation and conduction velocity estimation in cardiac mapping. Computers in Biology and Medicine, 2015, 65, 229-242.	7.0	142
3	Spatial Resolution Requirements for Accurate Identification of Drivers of Atrial Fibrillation. Circulation: Arrhythmia and Electrophysiology, 2017, 10, e004899.	4.8	120
4	Finite element assembly strategies on multiâ€core and manyâ€core architectures. International Journal for Numerical Methods in Fluids, 2013, 71, 80-97.	1.6	85
5	Nektar++: Enhancing the capability and application of high-fidelity spectral/<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e862" altimg="si5.svg"><mml:mrow><mml:mi>h</mml:mi><mml:mi>p</mml:mi></mml:mrow></mml:math> element methods. Computer Physics Communications, 2020, 249, 107110.	7.5	82
6	From h to p efficiently: Strategy selection for operator evaluation on hexahedral and tetrahedral elements. Computers and Fluids, 2011, 43, 23-28.	2.5	75
7	Spectral/hp element methods: Recent developments, applications, and perspectives. Journal of Hydrodynamics, 2018, 30, 1-22.	3.2	74
8	Considering discrepancy when calibrating a mechanistic electrophysiology model. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190349.	3.4	46
9	Voltage during atrial fibrillation is superior to voltage during sinus rhythm in localizing areas of delayed enhancement on magnetic resonance imaging: An assessment of the posterior left atrium in patients with persistent atrial fibrillation. Heart Rhythm, 2019, 16, 1357-1367.	0.7	40
10	Rethinking multiscale cardiac electrophysiology with machine learning and predictive modelling. Computers in Biology and Medicine, 2019, 104, 339-351.	7.0	40
11	High-order spectral/hp element discretisation for reactionâ€“diffusion problems on surfaces: Application to cardiac electrophysiology. Journal of Computational Physics, 2014, 257, 813-829.	3.8	36
12	From h to p Efficiently: Selecting the Optimal Spectral/hpDiscretisation in Three Dimensions. Mathematical Modelling of Natural Phenomena, 2011, 6, 84-96.	2.4	34
13	Rotor Tracking Using Phase of Electrograms Recorded During Atrial Fibrillation. Annals of Biomedical Engineering, 2017, 45, 910-923.	2.5	34
14	Determinants of new wavefront locations in cholinergic atrial fibrillation. Europace, 2018, 20, iii3-iii15.	1.7	27
15	An audit of uncertainty in multi-scale cardiac electrophysiology models. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190335.	3.4	25
16	A novel approach to mapping the atrial ganglionated plexus network by generating a distribution probability atlas. Journal of Cardiovascular Electrophysiology, 2018, 29, 1624-1634.	1.7	22
17	An automated algorithm for determining conduction velocity, wavefront direction and origin of focal cardiac arrhythmias using a multipolar catheter. , 2014, 2014, 1583-6.		20
18	Concurrent micro- to macro-cardiac electrophysiology in myocyte cultures and human heart slices. Scientific Reports, 2018, 8, 6947.	3.3	20

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19	Optimising the performance of the spectral/<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si10.gif" display="inline" overflow="scroll"><mml:mi>h</mml:mi><mml:mi>p</mml:mi></mml:math> element method with collective linear algebra operations. Computer Methods in Applied Mechanics and Engineering, 2016, 310, 628-645.	6.6	18
20	Analytical approaches for myocardial fibrillation signals. Computers in Biology and Medicine, 2018, 102, 315-326.	7.0	17
21	Computational study of subcritical response in flow past a circular cylinder. Physical Review E, 2010, 82, 026315.	2.1	15
22	Characterisation of re-entrant circuit (or rotational activity) in vitro using the HL1-6 myocyte cell line. Journal of Molecular and Cellular Cardiology, 2018, 119, 155-164.	1.9	15
23	A software platform for the comparative analysis of electroanatomic and imaging data including conduction velocity mapping. , 2014, 2014, 1591-4.		14
24	An adaptable parallel algorithm for the direct numerical simulation of incompressible turbulent flows using a Fourier spectral/ hp element method and MPI virtual topologies. Computer Physics Communications, 2016, 206, 17-25.	7.5	13
25	Approximating the Solution of Surface Wave Propagation Using Deep Neural Networks. Proceedings of the International Neural Networks Society, 2020, , 246-256.	0.6	10
26	Leading-edge vortex dynamics on plunging airfoils and wings. Journal of Fluid Mechanics, 2022, 940, .	3.4	10
27	A technique for visualising three-dimensional left atrial cardiac activation data in two dimensions with minimal distance distortion. , 2015, 2015, 7296-9.		8
28	Reducing complexity and unidentifiability when modelling human atrial cells. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190339.	3.4	7
29	Resilience and fault tolerance in high-performance computing for numerical weather and climate prediction. International Journal of High Performance Computing Applications, 2021, 35, 285-311.	3.7	7
30	Automated fiducial point selection for reducing registration error in the co-localisation of left atrium electroanatomic and imaging data. , 2015, 2015, 1989-92.		6
31	A Minimally Intrusive Low-Memory Approach to Resilience for Existing Transient Solvers. Journal of Scientific Computing, 2019, 78, 565-581.	2.3	6
32	Left Atrial Enhancement Correlates With Myocardial Conduction Velocity in Patients With Persistent Atrial Fibrillation. Frontiers in Physiology, 2020, 11, 570203.	2.8	6
33	Nekkloud: A software environment for high-order finite element analysis on clusters and clouds. , 2013, , .		5
34	Spectral/hp element methods for plane Newtonian extrudate swell. Computers and Fluids, 2015, 116, 105-117.	2.5	5
35	Anatomical Distribution of Ectopy-Triggering Plexuses in Patients With Atrial Fibrillation. Circulation: Arrhythmia and Electrophysiology, 2020, 13, e008715.	4.8	5
36	Development of a pro-arrhythmic ex vivo intact human and porcine model: cardiac electrophysiological changes associated with cellular uncoupling. Pflugers Archiv European Journal of Physiology, 2020, 472, 1435-1446.	2.8	5

#	Article	IF	Citations
37	A spectral/ hp element method for thermal convection. International Journal for Numerical Methods in Fluids, 2021, 93, 2380-2395.	1.6	3
38	Influence of left atrial geometry on rotor core trajectories in a model of atrial fibrillation. , 2015, , .		2
39	TemPSS: A Service Providing Software Parameter Templates and Profiles for Scientific HPC. , 2015, , .		1
40	Ensuring an Effective User Experience When Managing and Running Scientific HPC Software. , 2015, , .		1
41	On weak Dirichlet boundary conditions for elliptic problems in the continuous Galerkin method. Journal of Computational Physics, 2019, 394, 732-744.	3.8	1