David A Nordsletten

List of Publications by Year
in descending order

51 papers	1,464 citations	304743 22 h-index	345221 36 g-index
54 all docs	54 docs citations	54 times ranked	1706 citing authors

#	Article	IF	Citations
1	Multiphysics and multiscale modelling, dataâ€“model fusion and integration of organ physiology in the clinic: ventricular cardiac mechanics. Interface Focus, 2016, 6, 20150083.	3.0	165
2	Multi-modality image-based computational analysis of haemodynamics in aortic dissection. Biomechanics and Modeling in Mechanobiology, 2016, 15, 857-876.	2.8	104
3	Inflow Typology and Ventricular Geometry Determine Efficiency of Filling in the Hypoplastic Left Heart. Annals of Thoracic Surgery, 2012, 94, 1562-1569.	1.3	103
4	Beyond Bernoulli. Circulation: Cardiovascular Imaging, 2017, 10, .	2.6	60
5	Stiffness reconstruction methods for MR elastography. NMR in Biomedicine, 2018, 31, e3935.	2.8	59
6	Studying Dynamic Myofiber Aggregate Reorientation in Dilated Cardiomyopathy Using In Vivo Magnetic Resonance Diffusion Tensor Imaging. Circulation: Cardiovascular Imaging, 2016, 9, .	2.6	58
7	Estimation of passive and active properties in the human heart using 3D tagged MRI. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1121-1139.	2.8	55
8	Non-invasive pressure difference estimation from PC-MRI using the work-energy equation. Medical Image Analysis, 2015, 26, 159-172.	11.6	53
9	Analysis of passive cardiac constitutive laws for parameter estimation using 3D tagged MRI. Biomechanics and Modeling in Mechanobiology, 2015, 14, 807-828.	2.8	47
10	Robust MR elastography stiffness quantification using a localized divergence free finite element reconstruction. Medical Image Analysis, 2018, 44, 126-142.	11.6	45
11	A framework for combining a motion atlas with non-motion information to learn clinically useful biomarkers: Application to cardiac resynchronisation therapy response prediction. Medical Image Analysis, 2017, 35, 669-684.	11.6	35
12	Non-invasive Model-Based Assessment of Passive Left-Ventricular Myocardial Stiffness in Healthy Subjects and in Patients with Non-ischemic Dilated Cardiomyopathy. Annals of Biomedical Engineering, 2017, 45, 605-618.	2.5	33
13	Bridging Three Orders of Magnitude: Multiple Scattered Waves Sense Fractal Microscopic Structures via Dispersion. Physical Review Letters, 2015, 115, 094301.	7.8	32
14	Imaging localized neuronal activity at fast time scales through biomechanics. Science Advances, 2019, 5, eaav3816.	10.3	32
15	A displacement-based finite element formulation for incompressible and nearly-incompressible cardiac mechanics. Computer Methods in Applied Mechanics and Engineering, 2014, 274, 213-236.	6.6	31
16	Multi-Scale Parameterisation of a Myocardial Perfusion Model Using Whole-Organ Arterial Networks. Annals of Biomedical Engineering, 2014, 42, 797-811.	2.5	31
17	An efficient and accurate method for modeling nonlinear fractional viscoelastic biomaterials. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112834.	6.6	29
18	False lumen pressure estimation in type B aortic dissection using 4D flow cardiovascular magnetic resonance: comparisons with aortic growth. Journal of Cardiovascular Magnetic Resonance, 2021, 23, 51.	3.3	29

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19	Improved identifiability of myocardial material parameters by an energy-based cost function. Biomechanics and Modeling in Mechanobiology, 2017, 16, 971-988.	2.8	26
20	Estimation of Cardiovascular Relative Pressure Using Virtual Work-Energy. Scientific Reports, 2019, 9, 1375.	3.3	25
21	Computational analysis of the importance of flow synchrony for cardiac ventricular assist devices. Computers in Biology and Medicine, 2014, 49, 83-94.	7.0	24
22	Left ventricular outflow obstruction predicts increase in systolic pressure gradients and blood residence time after transcatheter mitral valve replacement. Scientific Reports, 2018, 8, 15540.	3.3	24
23	A viscoelastic model for human myocardium. Acta Biomaterialia, 2021, 135, 441-457.	8.3	23
24	Comparative Analysis of Nonlinear Viscoelastic Models Across Common Biomechanical Experiments. Journal of Elasticity, 2021, 145, 117-152.	1.9	22
25	Magnetic Resonance Elastography Reconstruction for Anisotropic Tissues. Medical Image Analysis, 2021, 74, 102212.	11.6	22
26	In silico coronary wave intensity analysis: application of an integrated one-dimensional and poromechanical model of cardiac perfusion. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1535-1555.	2.8	21
27	Nonlinear viscoelastic constitutive model for bovine liver tissue. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1641-1662.	2.8	21
28	Toward GPGPU accelerated human electromechanical cardiac simulations. International Journal for Numerical Methods in Biomedical Engineering, 2014, 30, 117-134.	2.1	20
29	Non-invasive estimation of relative pressure in turbulent flow using virtual work-energy. Medical Image Analysis, 2020, 60, 101627.	11.6	20
30	Towards noninvasive estimation of tumour pressure by utilising MR elastography and nonlinear biomechanical models: a simulation and phantom study. Scientific Reports, 2020, 10, 5588.	3.3	19
31	Modeling Left Atrial Flow, Energy, Blood Heating Distribution in Response to Catheter Ablation Therapy. Frontiers in Physiology, 2018, 9, 1757.	2.8	18
32	Physiologic biomechanics enhance reproducible contractile development in a stem cell derived cardiac muscle platform. Nature Communications, 2021, 12, 6167.	12.8	18
33	Validation of a nonâ€conforming monolithic fluidâ€structure interaction method using phaseâ€contrast MRI. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, e2845.	2.1	17
34	Magnetic resonance elastography in nonlinear viscoelastic materials under load. Biomechanics and Modeling in Mechanobiology, 2019, 18, 111-135.	2.8	17
35	Non-invasive estimation of relative pressure for intracardiac flows using virtual work-energy. Medical Image Analysis, 2021, 68, 101948.	11.6	16
36	Noninvasive quantification of cerebrovascular pressure changes using 4D Flow MRI. Magnetic Resonance in Medicine, 2021, 86, 3096-3110.	3.0	13

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37	The effects of viscoelasticity on residual strain in aortic soft tissues. Acta Biomaterialia, 2022, 140, 398-411.	8.3	13
38	An Implementation of Patient-Specific Biventricular Mechanics Simulations With a Deep Learning and Computational Pipeline. Frontiers in Physiology, 2021, 12, 716597.	2.8	12
39	The Use of Biophysical Flow Models in the Surgical Management of Patients Affected by Chronic Thromboembolic Pulmonary Hypertension. Frontiers in Physiology, 2018, 9, 223.	2.8	11
40	A partition of unity approach to fluid mechanics and fluidâ€“structure interaction. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112842.	6.6	11
41	Investigating the reference domain influence in personalised models of cardiac mechanics. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1579-1597.	2.8	8
42	Myocardial strain computed at multiple spatial scales from tagged magnetic resonance imaging: Estimating cardiac biomarkers for CRT patients. Medical Image Analysis, 2018, 43, 169-185.	11.6	7
43	Evaluation of aortic stenosis: From Bernoulli and Doppler to Navier-Stokes. Trends in Cardiovascular Medicine, 2021, , .	4.9	7
44	A class of analytic solutions for verification and convergence analysis of linear and nonlinear fluid-structure interaction algorithms. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112841.	6.6	5
45	Time-periodic steady-state solution of fluid-structure interaction and cardiac flow problems through multigrid-reduction-in-time. Computer Methods in Applied Mechanics and Engineering, 2022, 389, 114368.	6.6	4
46	Altered Aortic Hemodynamics and Relative Pressure in Patients with Dilated Cardiomyopathy. Journal of Cardiovascular Translational Research, 2021, , 1.	2.4	4
47	Left Atrial Appendage Morphology Impacts Thrombus Formation Risks in Multi-Physics Atrial Models. , 2021, , .		3
48	Unlocking the Non-invasive Assessment of Conduit and Reservoir Function in the Aorta. Journal of Cardiovascular Translational Research, 2022, 15, 1075-1085.	2.4	2
49	3D Fluidâ€Structure Interaction Experiment and Benchmark Results. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 451-452.	0.2	1
50	Impact of axisymmetric deformation on MR elastography of a nonlinear tissue-mimicking material and implications in peri-tumour stiffness quantification. PLoS ONE, 2021, 16, e0253804.	2.5	1
51	Comprehensive Assessment of Left Intraventricular Hemodynamics Using a Finite Element Method: An Application to Dilated Cardiomyopathy Patients. Applied Sciences (Switzerland), 2021, 11, 11165.	2.5	1