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	The effects of viscoelasticity on residual strain in aortic soft tissues. Acta Biomaterialia, 2022, 140, 398-411.	8.3	13
2	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
3	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
4	Non-invasive estimation of relative pressure for intracardiac flows using virtual work-energy. Medical Image Analysis, 2021, 68, 101948.	11.6	16
5	Comparative Analysis of Nonlinear Viscoelastic Models Across Common Biomechanical Experiments. Journal of Elasticity, 2021, 145, 117-152.	1.9	22
6	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
7	Investigating the reference domain influence in personalised models of cardiac mechanics. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1579-1597.	2.8	8
8	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
9	Noninvasive quantification of cerebrovascular pressure changes using 4D Flow MRI. Magnetic Resonance in Medicine, 2021, 86, 3096-3110.	3.0	13
10	A viscoelastic model for human myocardium. Acta Biomaterialia, 2021, 135, 441-457.	8.3	23
11	An Implementation of Patient-Specific Biventricular Mechanics Simulations With a Deep Learning and Computational Pipeline. Frontiers in Physiology, 2021, 12, 716597.	2.8	12
12	Magnetic Resonance Elastography Reconstruction for Anisotropic Tissues. Medical Image Analysis, 2021, 74, 102212.	11.6	22
13	Physiologic biomechanics enhance reproducible contractile development in a stem cell derived cardiac muscle platform. Nature Communications, 2021, 12, 6167.	12.8	18
14	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
15	Left Atrial Appendage Morphology Impacts Thrombus Formation Risks in Multi-Physics Atrial Models. , 2021, , .		3
16	Evaluation of aortic stenosis: From Bernoulli and Doppler to Navier-Stokes. Trends in Cardiovascular Medicine, 2021, , .	4.9	7
17	Altered Aortic Hemodynamics and Relative Pressure in Patients with Dilated Cardiomyopathy. Journal of Cardiovascular Translational Research, 2021, , 1.	2.4	4
18	Non-invasive estimation of relative pressure in turbulent flow using virtual work-energy. Medical Image Analysis, 2020, 60, 101627.	11.6	20

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19	Nonlinear viscoelastic constitutive model for bovine liver tissue. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1641-1662.	2.8	21
20	An efficient and accurate method for modeling nonlinear fractional viscoelastic biomaterials. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112834.	6.6	29
21	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
22	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
23	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
24	Imaging localized neuronal activity at fast time scales through biomechanics. Science Advances, 2019, 5, eaav3816.	10.3	32
25	Estimation of Cardiovascular Relative Pressure Using Virtual Work-Energy. Scientific Reports, 2019, 9, 1375.	3.3	25
26	Magnetic resonance elastography in nonlinear viscoelastic materials under load. Biomechanics and Modeling in Mechanobiology, 2019, 18, 111-135.	2.8	17
27	Robust MR elastography stiffness quantification using a localized divergence free finite element reconstruction. Medical Image Analysis, 2018, 44, 126-142.	11.6	45
28	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
29	Modeling Left Atrial Flow, Energy, Blood Heating Distribution in Response to Catheter Ablation Therapy. Frontiers in Physiology, 2018, 9, 1757.	2.8	18
30	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
31	Stiffness reconstruction methods for MR elastography. NMR in Biomedicine, 2018, 31, e3935.	2.8	59
32	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
33	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
34	Beyond Bernoulli. Circulation: Cardiovascular Imaging, 2017, 10, .	2.6	60
35	Improved identifiability of myocardial material parameters by an energy-based cost function. Biomechanics and Modeling in Mechanobiology, 2017, 16, 971-988.	2.8	26
36	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

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37	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
38	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
39	Multi-modality image-based computational analysis of haemodynamics in aortic dissection. Biomechanics and Modeling in Mechanobiology, 2016, 15, 857-876.	2.8	104
40	Studying Dynamic Myofiber Aggregate Reorientation in Dilated Cardiomyopathy Using In Vivo Magnetic Resonance Diffusion Tensor Imaging. Circulation: Cardiovascular Imaging, 2016, 9, .	2.6	58
41	3D Fluidâ€Structure Interaction Experiment and Benchmark Results. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 451-452.	0.2	1
42	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
43	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
44	Bridging Three Orders of Magnitude: Multiple Scattered Waves Sense Fractal Microscopic Structures via Dispersion. Physical Review Letters, 2015, 115, 094301.	7.8	32
45	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
46	Non-invasive pressure difference estimation from PC-MRI using the work-energy equation. Medical Image Analysis, 2015, 26, 159-172.	11.6	53
47	Toward GPGPU accelerated human electromechanical cardiac simulations. International Journal for Numerical Methods in Biomedical Engineering, 2014, 30, 117-134.	2.1	20
48	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
49	Multi-Scale Parameterisation of a Myocardial Perfusion Model Using Whole-Organ Arterial Networks. Annals of Biomedical Engineering, 2014, 42, 797-811.	2.5	31
50	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
51	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