Bryn A Martin

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7772037/publications.pdf

Version: 2024-02-01

80 papers	1,573 citations	279487 23 h-index	344852 36 g-index
87 all docs	87 docs citations	87 times ranked	1142 citing authors

#	Article	IF	Citations
1	Human in silico trials for parametric computational fluid dynamics investigation of cerebrospinal fluid drug delivery: impact of injection location, injection protocol, and physiology. Fluids and Barriers of the CNS, 2022, 19, 8.	2.4	13
2	Automated MRI-based quantification of posterior ocular globe flattening and recovery after long-duration spaceflight. Eye, 2021, 35, 1869-1878.	1.1	12
3	In vitro evaluation of cerebrospinal fluid velocity measurement in type I Chiari malformation: repeatability, reproducibility, and agreement using 2D phase contrast and 4D flow MRI. Fluids and Barriers of the CNS, 2021, 18, 12.	2.4	12
4	MRI-based quantification of ophthalmic changes in healthy volunteers during acute 15Â° head-down tilt as an analogue to microgravity. Journal of the Royal Society Interface, 2021, 18, 20200920.	1.5	1
5	In vivo estimation of optic nerve sheath stiffness using noninvasive MRI measurements and finite element modeling. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 110, 103924.	1.5	10
6	Ex-vivo quantification of ovine pia arachnoid complex biomechanical properties under uniaxial tension. Fluids and Barriers of the CNS, 2020, 17, 68.	2.4	4
7	Quantitative magnetic resonance image assessment of the optic nerve and surrounding sheath after spaceflight. Npj Microgravity, 2020, 6, 30.	1.9	16
8	In vitro and numerical simulation of blood removal from cerebrospinal fluid: comparison of lumbar drain to Neurapheresis therapy. Fluids and Barriers of the CNS, 2020, 17, 23.	2.4	14
9	Impact of Neurapheresis System on Intrathecal Cerebrospinal Fluid Dynamics: A Computational Fluid Dynamics Study. Journal of Biomechanical Engineering, 2020, 142, .	0.6	9
10	Non-invasive MRI quantification of cerebrospinal fluid dynamics in amyotrophic lateral sclerosis patients. Fluids and Barriers of the CNS, 2020, 17, 4.	2.4	25
11	Intrathecal catheter implantation decreases cerebrospinal fluid dynamics in cynomolgus monkeys. PLoS ONE, 2020, 15, e0244090.	1.1	1
12	Research on the Pathophysiology of Chiari I-Related Symptoms and Syringomyelia, with Emphasis on Dynamic MRI Techniques. , 2020, , 167-179.		0
13	Modelling of Cerebrospinal Fluid Flow by Computational Fluid Dynamics. Biological and Medical Physics Series, 2019, , 215-241.	0.3	8
14	Anatomy and Physiology of Cerebrospinal Fluid Dynamics. , 2019, , 73-89.		3
15	Development of Common Data Elements for Use in Chiari Malformation Type I Clinical Research: An NIH/NINDS Project. Neurosurgery, 2019, 85, 854-860.	0.6	16
16	Dispersion in porous media in oscillatory flow between flat plates: applications to intrathecal, periarterial and paraarterial solute transport in the central nervous system. Fluids and Barriers of the CNS, 2019, 16, 13.	2.4	52
17	Characterization of intrathecal cerebrospinal fluid geometry and dynamics in cynomolgus monkeys (macaca fascicularis) by magnetic resonance imaging. PLoS ONE, 2019, 14, e0212239.	1.1	15
18	An Electrophysiological Study of Cognitive and Emotion Processing in Type I Chiari Malformation. Cerebellum, 2018, 17, 404-418.	1.4	22

#	Article	IF	Citations
19	A pilot study on the biomechanical assessment of obstructive sleep apnea pre and post bariatric surgery. Respiratory Physiology and Neurobiology, 2018, 250, 1-6.	0.7	8
20	Subarachnoid Trabeculae: A Comprehensive Review of Their Embryology, Histology, Morphology, and Surgical Significance. World Neurosurgery, 2018, 111, 279-290.	0.7	51
21	An MRI-Compatible Hydrodynamic Simulator of Cerebrospinal Fluid Motion in the Cervical Spine. IEEE Transactions on Biomedical Engineering, 2018, 65, 1516-1523.	2.5	12
22	Machine learning applied to neuroimaging for diagnosis of adult classic Chiari malformation: role of the basion as a key morphometric indicator. Journal of Neurosurgery, 2018, 129, 779-791.	0.9	21
23	A morphometric assessment of type I Chiari malformation above the McRae line: A retrospective case-control study in 302 adult female subjects. Journal of Neuroradiology, 2018, 45, 23-31.	0.6	38
24	Morphometric and volumetric comparison of 102 children with symptomatic and asymptomatic Chiari malformation Type I. Journal of Neurosurgery: Pediatrics, 2018, 21, 65-71.	0.8	33
25	Cerebellar tonsil ectopia measurement in type I Chiari malformation patients show poor inter-operator reliability. Fluids and Barriers of the CNS, 2018, 15, 33.	2.4	17
26	Anthropomorphic Model of Intrathecal Cerebrospinal Fluid Dynamics Within the Spinal Subarachnoid Space: Spinal Cord Nerve Roots Increase Steady-Streaming. Journal of Biomechanical Engineering, 2018, 140, .	0.6	28
27	A Retrospective 2D Morphometric Analysis of Adult Female Chiari Type I Patients with Commonly Reported and Related Conditions. Frontiers in Neuroanatomy, 2018, 12, 2.	0.9	25
28	Cardiac-Related Spinal Cord Tissue Motion at the Foramen Magnum is Increased in Patients with Type I Chiari Malformation and Decreases Postdecompression Surgery. World Neurosurgery, 2018, 116, e298-e307.	0.7	20
29	Cephalometric oropharynx and oral cavity analysis in Chiari malformation Type I: a retrospective case-control study. Journal of Neurosurgery, 2017, 126, 626-633.	0.9	12
30	Quantifying the influence of respiration and cardiac pulsations on cerebrospinal fluid dynamics using realâ€time phaseâ€contrast MRI. Journal of Magnetic Resonance Imaging, 2017, 46, 431-439.	1.9	106
31	Nonuniform Moving Boundary Method for Computational Fluid Dynamics Simulation of Intrathecal Cerebrospinal Flow Distribution in a Cynomolgus Monkey. Journal of Biomechanical Engineering, 2017, 139, .	0.6	12
32	Numerical study of intrathecal drug delivery to a permeable spinal cord: effect of catheter position and angle. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 1599-1608.	0.9	9
33	A 3D subject-specific model of the spinal subarachnoid space with anatomically realistic ventral and dorsal spinal cord nerve rootlets. Fluids and Barriers of the CNS, 2017, 14, 36.	2.4	36
34	313 Morphometric and Volumetric Comparison of Symptomatic and Asymptomatic Chiari Malformation Type I. Neurosurgery, 2017, 64, 267.	0.6	0
35	A numerical investigation of intrathecal isobaric drug dispersion within the cervical subarachnoid space. PLoS ONE, 2017, 12, e0173680.	1.1	19
36	Accuracy of 4D Flow Measurement of Cerebrospinal Fluid Dynamics in the Cervical Spine: An In Vitro Verification Against Numerical Simulation. Annals of Biomedical Engineering, 2016, 44, 3202-3214.	1.3	24

#	Article	IF	Citations
37	Cerebrospinal fluid velocity amplitudes within the cerebral aqueduct in healthy children and patients with Chiari I malformation. Journal of Magnetic Resonance Imaging, 2016, 44, 463-470.	1.9	21
38	Inter-operator Reliability of Magnetic Resonance Image-Based Computational Fluid Dynamics Prediction of Cerebrospinal Fluid Motion in the Cervical Spine. Annals of Biomedical Engineering, 2016, 44, 1524-1537.	1.3	15
39	Continuous positive airway pressure alters cranial blood flow and cerebrospinal fluid dynamics at the craniovertebral junction. Interdisciplinary Neurosurgery: Advanced Techniques and Case Management, 2015, 2, 152-159.	0.2	12
40	Characterization of the Discrepancies Between Four-Dimensional Phase-Contrast Magnetic Resonance Imaging and In-Silico Simulations of Cerebrospinal Fluid Dynamics. Journal of Biomechanical Engineering, 2015, 137, 051002.	0.6	21
41	Neural Tissue Motion Impacts Cerebrospinal Fluid Dynamics at the Cervical Medullary Junction: A Patient-Specific Moving-Boundary Computational Model. Annals of Biomedical Engineering, 2015, 43, 2911-2923.	1.3	27
42	The Impact of Spinal Cord Nerve Roots and Denticulate Ligaments on Cerebrospinal Fluid Dynamics in the Cervical Spine. PLoS ONE, 2014, 9, e91888.	1.1	46
43	Task-Specific and General Cognitive Effects in Chiari Malformation Type I. PLoS ONE, 2014, 9, e94844.	1.1	42
44	Cerebrospinal Fluid Flow Impedance is Elevated in Type I Chiari Malformation. Journal of Biomechanical Engineering, 2014, 136, 021012.	0.6	35
45	The effect of continuous positive airway pressure on total cerebral blood flow in healthy awake volunteers. Sleep and Breathing, 2013, 17, 289-296.	0.9	7
46	Syringomyelia: A review of the biomechanics. Journal of Fluids and Structures, 2013, 40, 1-24.	1.5	33
47	Cerebrospinal Fluid Dynamics in the Cervical Spine: Importance of Fine Anatomical Structures. , 2013, , .		0
48	Relation of Cerebrospinal Fluid Flow Impedance and Cerebellar Herniation in Type I Chiari Malformation. , 2013, , .		0
49	Uvula Dynamic Characteristics. , 2013, , .		0
50	Hydrodynamic and Longitudinal Impedance Analysis of Cerebrospinal Fluid Dynamics at the Craniovertebral Junction in Type I Chiari Malformation. PLoS ONE, 2013, 8, e75335.	1.1	54
51	Method for Dynamic Material Property Characterization of Soft-Tissue-Mimicking Isotropic Viscoelastic Materials Using Fractional Damping Models. Journal of Testing and Evaluation, 2013, 41, 804-812.	0.4	1
52	Where do we stand on the relationship between tau biomarkers and mild cognitive impairment?. Quantitative Imaging in Medicine and Surgery, 2013, 3, 189-91.	1.1	2
53	Ventricle Equilibrium Position in Healthy and Normal Pressure Hydrocephalus Brains Using an Analytical Model. Journal of Biomechanical Engineering, 2012, 134, 041007.	0.6	11
54	A coupled hydrodynamic model of the cardiovascular and cerebrospinal fluid system. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 302, H1492-H1509.	1.5	52

#	Article	IF	Citations
55	Magnetic resonance 4D flow analysis of cerebrospinal fluid dynamics in Chiari I malformation with and without syringomyelia. European Radiology, 2012, 22, 1860-1870.	2.3	77
56	Prediction of the Impact of Craniospinal Compliance on the Relative Timing of Arterial and Cerebrospinal Fluid Pulsations and Perivascular Fluid Flow Into the Spinal Cord. , 2012, , .		0
57	4D MRI Flow Quantification of Cerebrospinal Fluid Motion in the Cervical Spine in Healthy Subjects and Chiari Malformation Patients: How Do the Results Compare With 3D Computational Fluid Dynamics?. , 2012, , .		0
58	Response to comments regarding Vardoulis O, etÂal., Impact of Aortic Grafts on Arterial Pressure: A Computational Fluid Dynamics Study. Eur J Vasc Endovasc Surg 2011;42:704â€“10. European Journal of Vascular and Endovascular Surgery, 2012, 43, 238-239.	0.8	0
59	Comparison of 4D Phase-Contrast MRI Flow Measurements to Computational Fluid Dynamics Simulations of Cerebrospinal Fluid Motion in the Cervical Spine. PLoS ONE, 2012, 7, e52284.	1.1	74
60	Continuous Positive Airway Pressure Impacts Cerebral Blood Flow and Cerebrospinal Fluid Motion: A Phase Contrast MRI Study. , 2012, , .		0
61	Quantitative comparison of 4D MRI flow measurements to 3D computational fluid dynamics simulation of cerebrospinal fluid movement in the spinal subarachnoid space. , 2011, , .		4
62	Impact of aortic grafts on hemodynamics: A 1D computational assessment. , 2011, , .		1
63	A Coupled Simulation of Spinal Cord Blood Flow and Cerebrospinal Fluid Motion in the Spinal Subarachnoid Space Based on In Vivo Measurements. , 2011, , .		0
64	Impact of Aortic Grafts on Arterial Pressure: A Computational Fluid Dynamics Study. European Journal of Vascular and Endovascular Surgery, 2011, 42, 704-710.	0.8	51
65	The effect of continuous positive airway pressure on total cerebral blood flow in 23 healthy awake volunteers. , 2011, , .		1
66	Cerebrospinal fluid hydrodynamics in type I Chiari malformation. Neurological Research, 2011, 33, 247-260.	0.6	66
67	The Effect of Continuous Positive Airway Pressure on Total Cerebral Blood Flow in 23 Healthy Awake Volunteers. , 2011, , .		0
68	Assessment of Aortic Graft Impact on Hemodynamics. , 2011, , .		0
69	Spinal Subarachnoid Space Pressure Measurements in an In Vitro Spinal Stenosis Model: Implications on Syringomyelia Theories. Journal of Biomechanical Engineering, 2010, 132, 111007.	0.6	57
70	A Fluid Structure Interaction Simulation of the Cerebrospinal Fluid, Spinal Cord, and Spinal Stenosis Present in Syringomyelia. , 2010, , .		0
71	MR Measurement of Cerebrospinal Fluid Velocity Wave Speed in the Spinal Canal. IEEE Transactions on Biomedical Engineering, 2009, 56, 1765-1768.	2.5	44
72	The influence of coughing on cerebrospinal fluid pressure in an in vitro syringomyelia model with spinal subarachnoid space stenosis. Cerebrospinal Fluid Research, 2009, 6, 17.	0.5	42

#	Article	IF	Citations
73	Pathological Biomechanics of Cerebrospinal Fluid Pressure in Syringomyelia: Fluid Structure Interaction of an In Vitro Coaxial Elastic Tube System. , 2009, , .		1
74	The Influence of Coughing on Cerebrospinal Fluid Pressure in an In Vitro Syringomyelia Model With Spinal Canal Stenosis. , 2009, , .		0
75	Towards Non-Invasive Assessment of the Elastic Properties of the Spinal Aqueduct. , 2009, , .		0
76	MR Measurement of Pulse Wave Velocity in the Spinal Canal. , 2008, , .		1
77	Acoustic radiation from a fluid-filled, subsurface vascular tube with internal turbulent flow due to a constriction. Journal of the Acoustical Society of America, 2005, 118, 1193-1209.	0.5	27
78	Syringomyelia Hydrodynamics: An In Vitro Study Based on In Vivo Measurements. Journal of Biomechanical Engineering, 2005, 127, 1110-1120.	0.6	44
79	Construction and Validation of a Complaint Model of the Cerebrospinal Fluid System With Fluid Filled Syrinx. , 2004, , .		0
80	Investigation of Human Intrathecal Solute Transport Dynamics Using a Novel in vitro Cerebrospinal Fluid System Analog. , 0, 1, .		0