Juan R Cebral

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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.

120 papers	5,184 citations	40 h-index	70 g-index
135 ext. papers	5,838 ext. citations	4.1 avg, IF	5.64 L-index

#	Paper	IF	Citations
120	Efficient pipeline for image-based patient-specific analysis of cerebral aneurysm hemodynamics: technique and sensitivity. *IEEE Transactions on Medical Imaging*, **2005**, 24, 457-67	11.7	408
119	Characterization of cerebral aneurysms for assessing risk of rupture by using patient-specific computational hemodynamics models. *American Journal of Neuroradiology*, **2005**, 26, 2550-9	4.4	407
118	Quantitative characterization of the hemodynamic environment in ruptured and unruptured brain aneurysms. *American Journal of Neuroradiology*, **2011**, 32, 145-51	4.4	307
117	Association of hemodynamic characteristics and cerebral aneurysm rupture. *American Journal of Neuroradiology*, **2011**, 32, 264-70	4.4	307
116	Aneurysm rupture following treatment with flow-diverting stents: computational hemodynamics analysis of treatment. *American Journal of Neuroradiology*, **2011**, 32, 27-33	4.4	279
115	Technologies for guidance of radiofrequency ablation in the multimodality interventional suite of the future. *Journal of Vascular and Interventional Radiology*, **2007**, 18, 9-24	2.4	131
114	Hemodynamics and bleb formation in intracranial aneurysms. *American Journal of Neuroradiology*, **2010**, 31, 304-10	4.4	130
113	Blood flow modeling in carotid arteries with computational fluid dynamics and MR imaging. *Academic Radiology*, **2002**, 9, 1286-99	4.3	117
112	Flow-area relationship in internal carotid and vertebral arteries. *Physiological Measurement*, **2008**, 29, 585-94	2.9	115
111	From medical images to anatomically accurate finite element grids. *International Journal for Numerical Methods in Engineering*, **2001**, 51, 985-1008	2.4	111
110	Efficient simulation of blood flow past complex endovascular devices using an adaptive embedding technique. *IEEE Transactions on Medical Imaging*, **2005**, 24, 468-76	11.7	104
109	Flow Conditions in the Intracranial Aneurysm Lumen Are Associated with Inflammation and Degenerative Changes of the Aneurysm Wall. *American Journal of Neuroradiology*, **2017**, 38, 119-126	4.4	102
108	Estimation of bolus dispersion effects in perfusion MRI using image-based computational fluid dynamics. *NeuroImage*, **2003**, 19, 341-53	7.9	89
107	Suggested connections between risk factors of intracranial aneurysms: a review. *Annals of Biomedical Engineering*, **2013**, 41, 1366-83	4.7	76
106	Adaptive embedded and immersed unstructured grid techniques. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 2173-2197	5.7	76
105	Computational fluid dynamics of stented intracranial aneurysms using adaptive embedded unstructured grids. *International Journal for Numerical Methods in Fluids*, **2008**, 57, 475-493	1.9	74
104	Flow-induced, inflammation-mediated arterial wall remodeling in the formation and progression of intracranial aneurysms. *Neurosurgical Focus*, **2019**, 47, E21	4.2	72

103	Blood-flow models of the circle of Willis from magnetic resonance data. *Journal of Engineering Mathematics*, **2003**, 47, 369-386	1.2	72
102	Simulation of intracranial aneurysm stenting: Techniques and challenges. *Computer Methods in Applied Mechanics and Engineering*, **2009**, 198, 3567-3582	5.7	71
101	Patient-specific computational modeling of cerebral aneurysms with multiple avenues of flow from 3D rotational angiography images. *Academic Radiology*, **2006**, 13, 811-21	4.3	71
100	Association between hemodynamic conditions and occlusion times after flow diversion in cerebral aneurysms. *Journal of NeuroInterventional Surgery*, **2015**, 7, 286-90	7.8	67
99	Analysis of hemodynamics and wall mechanics at sites of cerebral aneurysm rupture. *Journal of NeuroInterventional Surgery*, **2015**, 7, 530-6	7.8	61
98	Digital reconstruction and morphometric analysis of human brain arterial vasculature from magnetic resonance angiography. *NeuroImage*, **2013**, 82, 170-81	7.9	60
97	Diversity in the Strength and Structure of Unruptured Cerebral Aneurysms. *Annals of Biomedical Engineering*, **2015**, 43, 1502-15	4.7	58
96	Computational Hemodynamics Framework for the Analysis of Cerebral Aneurysms. *International Journal for Numerical Methods in Biomedical Engineering*, **2011**, 27, 822-839	2.6	58
95	Hemodynamics in Normal Cerebral Arteries: Qualitative Comparison of 4D Phase-Contrast Magnetic Resonance and Image-Based Computational Fluid Dynamics. *Journal of Engineering Mathematics*, **2009**, 64, 367-378	1.2	54
94	Computational fluid dynamics modeling of intracranial aneurysms: qualitative comparison with cerebral angiography. *Academic Radiology*, **2007**, 14, 804-13	4.3	52
93	Merging of intersecting triangulations for finite element modeling. *Journal of Biomechanics*, **2001**, 34, 815-9	2.9	52
92	CFD analysis incorporating the influence of wall motion: application to intracranial aneurysms. *Lecture Notes in Computer Science*, **2006**, 9, 438-45	0.9	52
91	Wall Mechanical Properties and Hemodynamics of Unruptured Intracranial Aneurysms. *American Journal of Neuroradiology*, **2015**, 36, 1695-703	4.4	51
90	CFD and PIV analysis of hemodynamics in a growing intracranial aneurysm. *International Journal for Numerical Methods in Biomedical Engineering*, **2012**, 28, 214-28	2.6	50
89	Tracheal and central bronchial aerodynamics using virtual bronchoscopy and computational fluid dynamics. *IEEE Transactions on Medical Imaging*, **2004**, 23, 1021-33	11.7	50
88	Hemodynamics and rupture of terminal cerebral aneurysms. *Academic Radiology*, **2009**, 16, 1201-7	4.3	49
87	Fast Numerical Solutions of Patient-Specific Blood Flows in 3D Arterial Systems. *International Journal for Numerical Methods in Biomedical Engineering*, **2010**, 26, 73-85	2.6	49
86	Wall Apposition Is a Key Factor for Aneurysm Occlusion after Flow Diversion: A Histologic Evaluation in 41 Rabbits. *American Journal of Neuroradiology*, **2016**, 37, 2087-2091	4.4	48

85	Hemodynamics in a lethal basilar artery aneurysm just before its rupture. *American Journal of Neuroradiology*, **2009**, 30, 95-8	4.4	46
84	Patient-specific flow analysis of brain aneurysms at a single location: comparison of hemodynamic characteristics in small aneurysms. *Medical and Biological Engineering and Computing*, **2008**, 46, 1113-20	3.1	46
83	Analysis of hemodynamics and aneurysm occlusion after flow-diverting treatment in rabbit models. *American Journal of Neuroradiology*, **2014**, 35, 1567-73	4.4	43
82	The effect of aneurysm geometry on the intra-aneurysmal flow condition. *Neuroradiology*, **2010**, 52, 1135-41	3.1	42
81	Computational fluid dynamics in brain aneurysms. *International Journal for Numerical Methods in Biomedical Engineering*, **2012**, 28, 801-8	2.6	41
80	Hemodynamics in growing and stable cerebral aneurysms. *Journal of NeuroInterventional Surgery*, **2016**, 8, 407-12	7.8	37
79	Development and internal validation of an aneurysm rupture probability model based on patient characteristics and aneurysm location, morphology, and hemodynamics. *International Journal of Computer Assisted Radiology and Surgery*, **2018**, 13, 1767-1779	3.9	37
78	Estimation of the differential pressure at renal artery stenoses. *Magnetic Resonance in Medicine*, **2004**, 51, 969-77	4.4	36
77	Associations of hemodynamics, morphology, and patient characteristics with aneurysm rupture stratified by aneurysm location. *Neuroradiology*, **2019**, 61, 275-284	3.2	36
76	Multiple Aneurysms AnaTomy CHallenge 2018 (MATCH): Phase I: Segmentation. *Cardiovascular Engineering and Technology*, **2018**, 9, 565-581	2.2	35
75	Morphometric, geographic, and territorial characterization of brain arterial trees. *International Journal for Numerical Methods in Biomedical Engineering*, **2014**, 30, 755-66	2.6	33
74	Local Hemodynamic Conditions Associated with Focal Changes in the Intracranial Aneurysm Wall. *American Journal of Neuroradiology*, **2019**, 40, 510-516	4.4	33
73	Patient-specific hemodynamic analysis of small internal carotid artery-ophthalmic artery aneurysms. *World Neurosurgery*, **2009**, 72, 444-50; discussion 450		32
72	Deflated preconditioned conjugate gradient solvers for the Pressure-Poisson equation. *Journal of Computational Physics*, **2008**, 227, 10196-10208	4.1	32
71	Hemodynamic differences between unstable and stable unruptured aneurysms independent of size and location: a pilot study. *Journal of NeuroInterventional Surgery*, **2017**, 9, 376-380	7.8	29
70	Unsteady wall shear stress analysis from image-based computational fluid dynamic aneurysm models under Newtonian and Casson rheological models. *Medical and Biological Engineering and Computing*, **2014**, 52, 827-39	3.1	29
69	Improving the speed and accuracy of projection-type incompressible flow solvers. *Computer Methods in Applied Mechanics and Engineering*, **2006**, 195, 3087-3109	5.7	29
68	Analysis of flow changes in side branches jailed by flow diverters in rabbit models. *International Journal for Numerical Methods in Biomedical Engineering*, **2014**, 30, 988-99	2.6	28

67	Cluster Analysis of Vortical Flow in Simulations of Cerebral Aneurysm Hemodynamics. *IEEE Transactions on Visualization and Computer Graphics*, **2016**, 22, 757-66	4	27
66	Computational modelling of blood flow in side arterial branches after stenting of cerebral aneurysms. *International Journal of Computational Fluid Dynamics*, **2008**, 22, 669-676	1.2	27
65	Regional Mapping of Flow and Wall Characteristics of Intracranial Aneurysms. *Annals of Biomedical Engineering*, **2016**, 44, 3553-3567	4.7	26
64	Hemodynamic Analysis of Intracranial Aneurysms with Moving Parent Arteries: Basilar Tip Aneurysms. *International Journal for Numerical Methods in Biomedical Engineering*, **2010**, 26, 1219-1227	2.6	24
63	Adaptive Embedded/Immersed Unstructured Grid Techniques. *Archives of Computational Methods in Engineering*, **2007**, 14, 279-301	7.8	24
62	Mechanism of Action and Biology of Flow Diverters in the Treatment of Intracranial Aneurysms. *Neurosurgery*, **2020**, 86, S13-S19	3.2	24
61	Applications of patient-specific CFD in medicine and life sciences. *International Journal for Numerical Methods in Fluids*, **2003**, 43, 637-650	1.9	22
60	Hemodynamic analysis of fast and slow aneurysm occlusions by flow diversion in rabbits. *Journal of NeuroInterventional Surgery*, **2015**, 7, 931-5	7.8	20
59	Identification of Hostile Hemodynamics and Geometries of Cerebral Aneurysms: A Case-Control Study. *American Journal of Neuroradiology*, **2018**, 39, 1860-1866	4.4	20
58	Comparison of body-fitted, embedded and immersed solutions of low Reynolds-number 3-D incompressible flows. *International Journal for Numerical Methods in Fluids*, **2008**, 57, 13-30	1.9	19
57	Hemodynamic Characteristics of Ruptured and Unruptured Multiple Aneurysms at Mirror and Ipsilateral Locations. *American Journal of Neuroradiology*, **2017**, 38, 2301-2307	4.4	18
56	Effects of changing physiologic conditions on the in vivo quantification of hemodynamic variables in cerebral aneurysms treated with flow diverting devices. *International Journal for Numerical Methods in Biomedical Engineering*, **2014**, 30, 135-42	2.6	18
55	Characterization of shear stress on the wall of the carotid artery using magnetic resonance imaging and computational fluid dynamics. *Studies in Health Technology and Informatics*, **2005**, 113, 412-42	0.5	17
54	Differences in Hemodynamics and Rupture Rate of Aneurysms at the Bifurcation of the Basilar and Internal Carotid Arteries. *American Journal of Neuroradiology*, **2017**, 38, 570-576	4.4	16
53	Comparison of statistical learning approaches for cerebral aneurysm rupture assessment. *International Journal of Computer Assisted Radiology and Surgery*, **2020**, 15, 141-150	3.9	15
52	Calcification in Human Intracranial Aneurysms Is Highly Prevalent and Displays Both Atherosclerotic and Nonatherosclerotic Types. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2019**, 39, 2157-2167	9.4	14
51	Angioarchitectures and Hemodynamic Characteristics of Posterior Communicating Artery Aneurysms and Their Association with Rupture Status. *American Journal of Neuroradiology*, **2017**, 38, 2111-2118	4.4	13
50	Advances in FEFLO **2001**,		13

49	Relationship between aneurysm occlusion and flow diverting device oversizing in a rabbit model. *Journal of NeuroInterventional Surgery*, **2016**, 8, 94-8	7.8	12
48	Combining data from multiple sources to study mechanisms of aneurysm disease: Tools and techniques. *International Journal for Numerical Methods in Biomedical Engineering*, **2018**, 34, e3133	2.6	12
47	Concomitant coiling reduces metalloproteinase levels in flow diverter-treated aneurysms but anti-inflammatory treatment has no effect. *Journal of NeuroInterventional Surgery*, **2017**, 9, 307-310	7.8	10
46	Strategy for analysis of flow diverting devices based on multi-modality image-based modeling. *International Journal for Numerical Methods in Biomedical Engineering*, **2014**, 30, 951-68	2.6	10
45	Parabolic recovery of boundary gradients. *Communications in Numerical Methods in Engineering*, **2007**, 24, 1611-1615		10
44	Regional Aneurysm Wall Enhancement is Affected by Local Hemodynamics: A 7T MRI Study. *American Journal of Neuroradiology*, **2021**, 42, 464-470	4.4	10
43	External validation of cerebral aneurysm rupture probability model with data from two patient cohorts. *Acta Neurochirurgica*, **2018**, 160, 2425-2434	3	10
42	Patient-Specific Simulation of Carotid Artery Stenting Using Computational Fluid Dynamics. *Lecture Notes in Computer Science*, **2001**, 153-160	0.9	10
41	Understanding Angiography-Based Aneurysm Flow Fields through Comparison with Computational Fluid Dynamics. *American Journal of Neuroradiology*, **2017**, 38, 1180-1186	4.4	9
40	Noninvasive characterization of carotid plaque strain. *Journal of Vascular Surgery*, **2017**, 65, 1653-1663	3.5	9
39	Subject-specific modeling of intracranial aneurysms **2004**,		9
38	Gene expression comparison of flow diversion and coiling in an experimental aneurysm model. *Journal of NeuroInterventional Surgery*, **2015**, 7, 926-30	7.8	8
37	Improving the Speed and Accuracy of Projection-Type Incompressible Flow Solvers **2003**,		8
36	Hemodynamics in aneurysm blebs with different wall characteristics. *Journal of NeuroInterventional Surgery*, **2021**, 13, 642-646	7.8	8
35	Asymptomatic carotid artery stenosis is associated with cerebral hypoperfusion. *Journal of Vascular Surgery*, **2021**, 73, 1611-1621.e2	3.5	8
34	Image-based modeling of blood flow in cerebral aneurysms treated with intrasaccular flow diverting devices. *International Journal for Numerical Methods in Biomedical Engineering*, **2019**, 35, e3202	2.6	7
33	Hemodynamics in two tandem aneurysms treated with flow diverters. *International Journal for Numerical Methods in Biomedical Engineering*, **2014**, 30, 517-24	2.6	7
32	Simulation of Stent Deployment in Patient-Specific Cerebral Aneurysm Models for Their Hemodynamics Analysis **2008**,		7

31	Extending statistical learning for aneurysm rupture assessment to Finnish and Japanese populations using morphology, hemodynamics, and patient characteristics. *Neurosurgical Focus*, **2019**, 47, E16	4.2	7
30	Development of a statistical model for discrimination of rupture status in posterior communicating artery aneurysms. *Acta Neurochirurgica*, **2018**, 160, 1643-1652	3	7
29	Hemodynamic conditions that favor bleb formation in cerebral aneurysms. *Journal of NeuroInterventional Surgery*, **2021**, 13, 231-236	7.8	7
28	Analysis of Flow Dynamics and Outcomes of Cerebral Aneurysms Treated with Intrasaccular Flow-Diverting Devices. *American Journal of Neuroradiology*, **2019**, 40, 1511-1516	4.4	6
27	Hemodynamics before and after bleb formation in cerebral aneurysms **2007**,		5
26	A feature-preserving volumetric technique to merge surface triangulations. *International Journal for Numerical Methods in Engineering*, **2002**, 55, 177-190	2.4	5
25	Image-based finite element modeling of hemodynamics in stenosed carotid artery **2002**, 4683, 297		5
24	Differential Gene Expression in Coiled versus Flow-Diverter-Treated Aneurysms: RNA Sequencing Analysis in a Rabbit Aneurysm Model. *American Journal of Neuroradiology*, **2016**, 37, 1114-21	4.4	5
23	Downstream vascular changes after flow-diverting device deployment in a rabbit model. *Journal of NeuroInterventional Surgery*, **2019**, 11, 523-527	7.8	5
22	Mechanisms Involved in the Formation of Biocompatible Lipid Polymeric Hollow Patchy Particles. *Langmuir*, **2015**, 31, 6639-48	4	4
21	Hemodynamic characteristics of stable and unstable vertebrobasilar dolichoectatic and fusiform aneurysms. *Journal of NeuroInterventional Surgery*, **2018**, 10, 1102-1107	7.8	4
20	Blebs in intracranial aneurysms: prevalence and general characteristics. *Journal of NeuroInterventional Surgery*, **2021**, 13, 226-230	7.8	4
19	Combined clinical and computational information in complex cerebral aneurysms: application to mirror cerebral aneurysms **2007**,		3
18	Multimodality image-based models of carotid artery hemodynamics (Cum Laude Poster Award) **2004**,		3
17	Computational modeling of cerebral aneurysms in arterial networks reconstructed from multiple 3D rotational angiography images **2005**, 5746, 233		3
16	A note on coding and standardization of categorical variables in (sparse) group lasso regression. *Journal of Statistical Planning and Inference*, **2020**, 206, 1-11	0.8	3
15	Computational analysis of anterior communicating artery aneurysm shear stress before and after aneurysm formation. *Journal of Physics: Conference Series*, **2011**, 332, 012001	0.3	2
14	Comparison of Body-Fitted, Embedded and Immersed Solutions of Low Reynolds-Number Incompressible Flows **2007**,		2

13	Finite element modeling of the Circle of Willis from magnetic resonance data **2003**,		2
12	Incorporating variability of patient inflow conditions into statistical models for aneurysm rupture assessment. *Acta Neurochirurgica*, **2020**, 162, 553-566	3	1
11	Hemodynamic differences in intracranial anerusysm blebs due to blood rheology. *Journal of Physics: Conference Series*, **2013**, 477, 012001	0.3	1
10	Hemodynamic patterns of anterior communicating artery aneurysms: a possible association with rupture **2007**,		1
9	Effects of parent vessel geometry on intraaneurysmal flow patterns **2006**,		1
8	A study of the hemodynamics of anterior communicating artery aneurysms **2006**, 6143, 166		1
7	Simulation of endovascular interventions of cerebral aneurysms: techniques and evaluation **2005**,		1
6	Analysis of hemodynamic changes from aneurysm inception to large sizes. *International Journal for Numerical Methods in Biomedical Engineering*, **2021**, 37, e3415	2.6	1
5	Connecting curves in higher dimensions. *Journal of Physics A: Mathematical and Theoretical*, **2014**, 47, 215101	2	0
4	Cerebrovascular systems with concomitant pathologies:A computational hemodynamics study. *Journal of Physics: Conference Series*, **2013**, 477, 012003	0.3	0
3	Evaluation of Outcome Prediction of Flow Diversion for Intracranial Aneurysms. *American Journal of Neuroradiology*, **2021**, 42, 1973-1978	4.4	0
2	. *American Journal of Neuroradiology*, **2017**, 38, E52	4.4	
1	Wall motion and hemodynamics in intracranial aneurysms. *Journal of Physics: Conference Series*, **2013**, 477, 012004	0.3	