

Danny Bluestein

List of Publications by Year in Descending Order

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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.

115
papers

3,898
citations

38
h-index

58
g-index

130
ext. papers

4,511
ext. citations

3.5
avg. IF

5.47
L-index

#	Paper	IF	Citations
115	Assessment of Paravalvular Leak Severity and Thrombogenic Potential in Transcatheter Bicuspid Aortic Valve Replacements Using Patient-Specific Computational Modeling. <i>Journal of Cardiovascular Translational Research</i> , 2021 , 1	3.3	1
114	Progressive Calcification in Bicuspid Valves: A Coupled Hemodynamics and Multiscale Structural Computations. <i>Annals of Biomedical Engineering</i> , 2021 , 1	4.7	1
113	A predictive multiscale model for simulating flow-induced platelet activation: Correlating in silico results with in vitro results. <i>Journal of Biomechanics</i> , 2021 , 117, 110275	2.9	6
112	A multiscale model for multiple platelet aggregation in shear flow. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021 , 20, 1013-1030	3.8	2
111	Rapid analysis of streaming platelet images by semi-supervised learning. <i>Computerized Medical Imaging and Graphics</i> , 2021 , 89, 101895	7.6	2
110	Platelet Dysfunction During Mechanical Circulatory Support: Elevated Shear Stress Promotes Downregulation of P2Y ₁ and GPIIb/IIIa via Microparticle Shedding Decreasing Platelet Aggregability. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2021 , 41, 1319-1336	9.4	7
109	In Vitro Measurements of Shear-Mediated Platelet Adhesion Kinematics as Analyzed through Machine Learning. <i>Annals of Biomedical Engineering</i> , 2021 , 1	4.7	1
108	Shear-mediated platelet activation in the free flow II: Evolving mechanobiological mechanisms reveal an identifiable signature of activation and a bi-directional platelet dyscrasia with thrombotic and bleeding features. <i>Journal of Biomechanics</i> , 2021 , 123, 110415	2.9	4
107	Patient-specific in vitro testing for evaluating TAVR clinical performance-A complementary approach to current ISO standard testing. <i>Artificial Organs</i> , 2021 , 45, E41-E52	2.6	3
106	Structural Responses of Integrated Parametric Aortic Valve in an Electro-Mechanical Full Heart Model. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 441-454	4.7	1
105	Artificial intelligence for accelerating time integrations in multiscale modeling. <i>Journal of Computational Physics</i> , 2021 , 427, 110053	4.1	5
104	Patient-Specific Bicuspid Aortic Valve Biomechanics: A Magnetic Resonance Imaging Integrated Fluid-Structure Interaction Approach. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 627-641	4.7	13
103	The use of poly(styrene-block-isobutylene-block-styrene) and analogs for long-term implant applications 2021 , 211-235		
102	Shear-Mediated Platelet Activation is Accompanied by Unique Alterations in Platelet Release of Lipids.. <i>Cellular and Molecular Bioengineering</i> , 2021 , 14, 597-612	3.9	0
101	Platelet Activation via Shear Stress Exposure Induces a Differing Pattern of Biomarkers of Activation versus Biochemical Agonists. <i>Thrombosis and Haemostasis</i> , 2020 , 120, 776-792	7	17
100	Shear-Induced Platelet Activation is Sensitive to Age and Calcium Availability: A Comparison of Adult and Cord Blood. <i>Cellular and Molecular Bioengineering</i> , 2020 , 13, 575-590	3.9	0
99	Numerical evaluation of transcatheter aortic valve performance during heart beating and its post-deployment fluid-structure interaction analysis. <i>Biomechanics and Modeling in Mechanobiology</i> , 2020 , 19, 1725-1740	3.8	21

98	Multiscale Modeling of Blood Flow-Mediated Platelet Thrombosis 2020 , 2667-2698		2
97	In Vitro Durability and Stability Testing of a Novel Polymeric Transcatheter Aortic Valve. <i>ASAIO Journal</i> , 2020 , 66, 190-198	3.6	8
96	Circulatory loop design and components introduce artifacts impacting in vitro evaluation of ventricular assist device thrombogenicity: A call for caution. <i>Artificial Organs</i> , 2020 , 44, E226-E237	2.6	2
95	Assessment of neonatal, cord, and adult platelet granule trafficking and secretion. <i>Platelets</i> , 2020 , 31, 68-78	3.6	8
94	Prothrombotic activity of cytokine-activated endothelial cells and shear-activated platelets in the setting of ventricular assist device support. <i>Journal of Heart and Lung Transplantation</i> , 2019 , 38, 658-667	5.8	9
93	Biomechanical modeling of transcatheter aortic valve replacement in a stenotic bicuspid aortic valve: deployments and paravalvular leakage. <i>Medical and Biological Engineering and Computing</i> , 2019 , 57, 2129-2143	3.1	20
92	A Multiscale Model for Recruitment Aggregation of Platelets by Correlating with Results. <i>Cellular and Molecular Bioengineering</i> , 2019 , 12, 327-343	3.9	15
91	Device Thrombogenicity Emulation: An In Silico Predictor of In Vitro and In Vivo Ventricular Assist Device Thrombogenicity. <i>Scientific Reports</i> , 2019 , 9, 2946	4.9	8
90	Novel Polymeric Valve for Transcatheter Aortic Valve Replacement Applications: In Vitro Hemodynamic Study. <i>Annals of Biomedical Engineering</i> , 2019 , 47, 113-125	4.7	33
89	Patient-specific simulation of transcatheter aortic valve replacement: impact of deployment options on paravalvular leakage. <i>Biomechanics and Modeling in Mechanobiology</i> , 2019 , 18, 435-451	3.8	56
88	Blood damage in Left Ventricular Assist Devices: Pump thrombosis or system thrombosis?. <i>International Journal of Artificial Organs</i> , 2019 , 42, 113-124	1.9	21
87	Realistic Vascular Replicator for TAVR Procedures. <i>Cardiovascular Engineering and Technology</i> , 2018 , 9, 339-350	2.2	15
86	Original article submission: Platelet stress accumulation analysis to predict thrombogenicity of an artificial kidney. <i>Journal of Biomechanics</i> , 2018 , 69, 26-33	2.9	5
85	Patient-Specific Numerical Model of Calcific Aortic Stenosis and Its Treatment by Balloon-Expandable Transcatheter Aortic Valve: Effect of Positioning on the Anchorage. <i>Lecture Notes in Bioengineering</i> , 2018 , 259-263	0.8	1
84	Comparative Fluid-Structure Interaction Analysis of Polymeric Transcatheter and Surgical Aortic Valves: Hemodynamics and Structural Mechanics. <i>Journal of Biomechanical Engineering</i> , 2018 ,	2.1	18
83	Multiscale Modeling of Blood Flow-Mediated Platelet Thrombosis 2018 , 1-32		1
82	Routine clinical anti-platelet agents have limited efficacy in modulating hypershear-mediated platelet activation associated with mechanical circulatory support. <i>Thrombosis Research</i> , 2018 , 163, 162-171	8.2	11
81	Principles of TAVR valve design, modelling, and testing. <i>Expert Review of Medical Devices</i> , 2018 , 15, 771-791	3.5	27

80	Design Effect of Metallic (Durable) and Polymeric (Resorbable) Stents on Blood Flow and Platelet Activation. <i>Artificial Organs</i> , 2018 , 42, 1148-1156	2.6	2
79	Reducing the effects of compressibility in DPD-based blood flow simulations through severe stenotic microchannels. <i>Journal of Computational Physics</i> , 2017 , 335, 812-827	4.1	13
78	A multiscale biomechanical model of platelets: Correlating with in-vitro results. <i>Journal of Biomechanics</i> , 2017 , 50, 26-33	2.9	27
77	Microfluidic platforms for the evaluation of anti-platelet agent efficacy under hyper-shear conditions associated with ventricular assist devices. <i>Medical Engineering and Physics</i> , 2017 , 48, 31-38	2.4	9
76	High Frequency Components of Hemodynamic Shear Stress Profiles are a Major Determinant of Shear-Mediated Platelet Activation in Therapeutic Blood Recirculating Devices. <i>Scientific Reports</i> , 2017 , 7, 4994	4.9	26
75	Ventricular Assist Device Implantation Configurations Impact Overall Mechanical Circulatory Support System Thrombogenic Potential. <i>ASAIO Journal</i> , 2017 , 63, 285-292	3.6	12
74	Shear-mediated platelet activation in the free flow: Perspectives on the emerging spectrum of cell mechanobiological mechanisms mediating cardiovascular implant thrombosis. <i>Journal of Biomechanics</i> , 2017 , 50, 20-25	2.9	42
73	Dielectrophoresis-Mediated Electrodeformation as a Means of Determining Individual Platelet Stiffness. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 903-13	4.7	23
72	Microfluidic approaches for the assessment of blood cell trauma: a focus on thrombotic risk in mechanical circulatory support devices. <i>International Journal of Artificial Organs</i> , 2016 , 39, 184-93	1.9	13
71	Repetitive Hypershear Activates and Sensitizes Platelets in a Dose-Dependent Manner. <i>Artificial Organs</i> , 2016 , 40, 586-95	2.6	20
70	Effect of macroscale formation of intraluminal thrombus on blood flow in abdominal aortic aneurysms. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016 , 19, 84-92	2.1	4
69	Fluid-structure interaction modeling of calcific aortic valve disease using patient-specific three-dimensional calcification scans. <i>Medical and Biological Engineering and Computing</i> , 2016 , 54, 1683-1694	2.1	24
68	Lagrangian methods for blood damage estimation in cardiovascular devices--How numerical implementation affects the results. <i>Expert Review of Medical Devices</i> , 2016 , 13, 113-22	3.5	22
67	Imaging analysis of collagen fiber networks in cusps of porcine aortic valves: effect of their local distribution and alignment on valve functionality. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016 , 19, 1002-8	2.1	10
66	Effect of Balloon-Expandable Transcatheter Aortic Valve Replacement Positioning: A Patient-Specific Numerical Model. <i>Artificial Organs</i> , 2016 , 40, E292-E304	2.6	27
65	Aspirin has limited ability to modulate shear-mediated platelet activation associated with elevated shear stress of ventricular assist devices. <i>Thrombosis Research</i> , 2016 , 140, 110-117	8.2	25
64	Scalability Test of Multiscale Fluid-Platelet Model for Three Top Supercomputers. <i>Computer Physics Communications</i> , 2016 , 204, 132-140	4.2	5
63	Hemocompatibility of Poly(vinyl alcohol)-Gelatin Core-Shell Electrospun Nanofibers: A Scaffold for Modulating Platelet Deposition and Activation. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 8302-12	9.5	47

62	Physical Characterization and Platelet Interactions under Shear Flows of a Novel Thermoset Polyisobutylene-based Co-polymer. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 22058-66	9.5	14
61	Hemodynamic and thrombogenic analysis of a trileaflet polymeric valve using a fluid-structure interaction approach. <i>Journal of Biomechanics</i> , 2015 , 48, 3641-9	2.9	41
60	Progression of abdominal aortic aneurysm towards rupture: refining clinical risk assessment using a fully coupled fluid-structure interaction method. <i>Annals of Biomedical Engineering</i> , 2015 , 43, 139-53	4.7	34
59	Comparative study of flow in right-sided and left-sided aortas: numerical simulations in patient-based models. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015 , 18, 414-25	2.1	5
58	Microfluidic emulation of mechanical circulatory support device shear-mediated platelet activation. <i>Biomedical Microdevices</i> , 2015 , 17, 117	3.7	20
57	A Multiple Time Stepping Algorithm for Efficient Multiscale Modeling of Platelets Flowing in Blood Plasma. <i>Journal of Computational Physics</i> , 2015 , 284, 668-686	4.1	29
56	Shear-mediated platelet activation in patients implanted with continuous flow LVADs: A preliminary study utilizing the platelet activity state (PAS) assay. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 1255-8	0.9	6
55	The platelet hammer: In vitro platelet activation under repetitive hypershear. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 262-5	0.9	2
54	Simulation of Transcatheter Aortic Valve Replacement in patient-specific aortic roots: Effect of crimping and positioning on device performance. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 282-5	0.9	8
53	A phenomenological particle-based platelet model for simulating filopodia formation during early activation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2015 , 31, e02702	2.6	21
52	Comparative efficacy of in vitro and in vivo metabolized aspirin in the DeBakey ventricular assist device. <i>Journal of Thrombosis and Thrombolysis</i> , 2014 , 37, 499-506	5.1	17
51	Parameterizing the Morse Potential for Coarse-Grained Modeling of Blood Plasma. <i>Journal of Computational Physics</i> , 2014 , 257, 726-736	4.1	16
50	Numerical model of full-cardiac cycle hemodynamics in a total artificial heart and the effect of its size on platelet activation. <i>Journal of Cardiovascular Translational Research</i> , 2014 , 7, 788-96	3.3	14
49	Multiscale Particle-Based Modeling of Flowing Platelets in Blood Plasma Using Dissipative Particle Dynamics and Coarse Grained Molecular Dynamics. <i>Cellular and Molecular Bioengineering</i> , 2014 , 7, 552-574	7.4	44
48	Computational evaluation of the thrombogenic potential of a hollow-fiber oxygenator with integrated heat exchanger during extracorporeal circulation. <i>Biomechanics and Modeling in Mechanobiology</i> , 2014 , 13, 349-61	3.8	28
47	Thromboresistance comparison of the HeartMate II ventricular assist device with the device thrombogenicity emulation- optimized HeartAssist 5 VAD. <i>Journal of Biomechanical Engineering</i> , 2014 , 136, 021014	2.1	64
46	Thrombus formation patterns in the HeartMate II ventricular assist device: clinical observations can be predicted by numerical simulations. <i>ASAIO Journal</i> , 2014 , 60, 237-40	3.6	42
45	Multiscale Modeling of Flow Induced Thrombogenicity With Dissipative Particle Dynamics and Molecular Dynamics. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2014 , 8, 0209541-209542	1.3	3

44	The Syncardia Total artificial heart: in vivo, in vitro, and computational modeling studies. <i>Journal of Biomechanics</i> , 2013 , 46, 266-75	2.9	51
43	A novel mathematical model of activation and sensitization of platelets subjected to dynamic stress histories. <i>Biomechanics and Modeling in Mechanobiology</i> , 2013 , 12, 1127-41	3.8	39
42	Device thrombogenicity emulation: a novel methodology for optimizing the thromboresistance of cardiovascular devices. <i>Journal of Biomechanics</i> , 2013 , 46, 338-44	2.9	41
41	Simulation of platelets suspension flowing through a stenosis model using a dissipative particle dynamics approach. <i>Annals of Biomedical Engineering</i> , 2013 , 41, 2318-33	4.7	25
40	Evaluation of shear-induced platelet activation models under constant and dynamic shear stress loading conditions relevant to devices. <i>Annals of Biomedical Engineering</i> , 2013 , 41, 1279-96	4.7	76
39	In vitro evaluation of a novel hemodynamically optimized trileaflet polymeric prosthetic heart valve. <i>Journal of Biomechanical Engineering</i> , 2013 , 135, 021021	2.1	42
38	Toward optimization of a novel trileaflet polymeric prosthetic heart valve via device thrombogenicity emulation. <i>ASAIO Journal</i> , 2013 , 59, 275-83	3.6	31
37	Viscous flow simulation in a stenosis model using discrete particle dynamics: a comparison between DPD and CFD. <i>Biomechanics and Modeling in Mechanobiology</i> , 2012 , 11, 119-29	3.8	22
36	Polymeric trileaflet prosthetic heart valves: evolution and path to clinical reality. <i>Expert Review of Medical Devices</i> , 2012 , 9, 577-94	3.5	48
35	Device thrombogenicity emulation: a novel method for optimizing mechanical circulatory support device thromboresistance. <i>PLoS ONE</i> , 2012 , 7, e32463	3.7	72
34	Microcalcifications increase coronary vulnerable plaque rupture potential: a patient-based micro-CT fluid-structure interaction study. <i>Annals of Biomedical Engineering</i> , 2012 , 40, 1443-54	4.7	44
33	Thrombogenic potential of Innovia polymer valves versus Carpentier-Edwards Perimount Magna aortic bioprosthetic valves. <i>ASAIO Journal</i> , 2011 , 57, 26-31	3.6	33
32	Design optimization of a mechanical heart valve for reducing valve thrombogenicity-A case study with ATS valve. <i>ASAIO Journal</i> , 2010 , 56, 389-96	3.6	42
31	Patient-based abdominal aortic aneurysm rupture risk prediction with fluid structure interaction modeling. <i>Annals of Biomedical Engineering</i> , 2010 , 38, 3323-37	4.7	59
30	Particle-based methods for multiscale modeling of blood flow in the circulation and in devices: challenges and future directions. Sixth International Bio-Fluid Mechanics Symposium and Workshop March 28-30, 2008 Pasadena, California. <i>Annals of Biomedical Engineering</i> , 2010 , 38, 1225-35	4.7	37
29	High-shear stress sensitizes platelets to subsequent low-shear conditions. <i>Annals of Biomedical Engineering</i> , 2010 , 38, 1442-50	4.7	103
28	The effect of angulation in abdominal aortic aneurysms: fluid-structure interaction simulations of idealized geometries. <i>Medical and Biological Engineering and Computing</i> , 2010 , 48, 1175-90	3.1	31
27	Device Thrombogenicity Emulator (DTE)--design optimization methodology for cardiovascular devices: a study in two bileaflet MHV designs. <i>Journal of Biomechanics</i> , 2010 , 43, 2400-9	2.9	85

26	Development and evaluation of a novel artificial catheter-deliverable prosthetic heart valve and method for in vitro testing. <i>International Journal of Artificial Organs</i> , 2009 , 32, 262-71	1.9	17
25	Intraluminal thrombus and risk of rupture in patient specific abdominal aortic aneurysm [FSI modelling]. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2009 , 12, 73-81	2.1	63
24	Blood damage safety of prosthetic heart valves. Shear-induced platelet activation and local flow dynamics: a fluid-structure interaction approach. <i>Journal of Biomechanics</i> , 2009 , 42, 1952-60	2.9	56
23	Abdominal aortic aneurysm risk of rupture: patient-specific FSI simulations using anisotropic model. <i>Journal of Biomechanical Engineering</i> , 2009 , 131, 031001	2.1	93
22	Intraluminal thrombus and risk of rupture in patient specific abdominal aortic aneurysm - FSI modelling. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2009 , 12, 73-81	2.1	21
21	Biological effects of dynamic shear stress in cardiovascular pathologies and devices. <i>Expert Review of Medical Devices</i> , 2008 , 5, 167-81	3.5	39
20	Platelet activation due to hemodynamic shear stresses: damage accumulation model and comparison to in vitro measurements. <i>ASAIO Journal</i> , 2008 , 54, 64-72	3.6	149
19	Influence of microcalcifications on vulnerable plaque mechanics using FSI modeling. <i>Journal of Biomechanics</i> , 2008 , 41, 1111-8	2.9	133
18	Flow-induced platelet activation and damage accumulation in a mechanical heart valve: numerical studies. <i>Artificial Organs</i> , 2007 , 31, 677-88	2.6	157
17	Comparison of the hemodynamic and thrombogenic performance of two bileaflet mechanical heart valves using a CFD/FSI model. <i>Journal of Biomechanical Engineering</i> , 2007 , 129, 558-65	2.1	125
16	The flow of a power-law fluid in the near-wake of a flat plate. <i>Physics of Fluids</i> , 2006 , 18, 088102	4.4	
15	Thrombogenic performance of a st. Jude bileaflet mechanical heart valve in a sheep model. <i>ASAIO Journal</i> , 2006 , 52, 28-33	3.6	11
14	The extent of platelet activation under shear depends on platelet count: differential expression of anionic phospholipid and factor Va. <i>Pathophysiology of Haemostasis and Thrombosis: International Journal on Haemostasis and Thrombosis Research</i> , 2005 , 34, 255-62		30
13	Flow-induced platelet activation in a St. Jude mechanical heart valve, a trileaflet polymeric heart valve, and a St. Jude tissue valve. <i>Artificial Organs</i> , 2005 , 29, 826-31	2.6	47
12	Bio-fluids educational issues: an emerging field aims to define its next generation. <i>Annals of Biomedical Engineering</i> , 2005 , 33, 1674-80	4.7	2
11	Activation of platelets exposed to shear stress in the presence of smoke extracts of low-nicotine and zero-nicotine cigarettes: the protective effect of nicotine. <i>Nicotine and Tobacco Research</i> , 2004 , 6, 835-41	4.9	19
10	Dynamics of blood flow and platelet transport in pathological vessels. <i>Annals of the New York Academy of Sciences</i> , 2004 , 1015, 351-66	6.5	67
9	Flow-induced platelet activation in bileaflet and monoleaflet mechanical heart valves. <i>Annals of Biomedical Engineering</i> , 2004 , 32, 1058-66	4.7	85

8	Research approaches for studying flow-induced thromboembolic complications in blood recirculating devices. <i>Expert Review of Medical Devices</i> , 2004 , 1, 65-80	3.5	67
7	Flow-induced platelet activation in mechanical heart valves. <i>Journal of Heart Valve Disease</i> , 2004 , 13, 501-8		52
6	Platelet activation in a circulating flow loop: combined effects of shear stress and exposure time. <i>Platelets</i> , 2003 , 14, 143-9	3.6	95
5	Vortex shedding as a mechanism for free emboli formation in mechanical heart valves. <i>Journal of Biomechanical Engineering</i> , 2000 , 122, 125-34	2.1	121
4	Vortex shedding in steady flow through a model of an arterial stenosis and its relevance to mural platelet deposition. <i>Annals of Biomedical Engineering</i> , 1999 , 27, 763-73	4.7	81
3	Acetylated prothrombin as a substrate in the measurement of the procoagulant activity of platelets: elimination of the feedback activation of platelets by thrombin. <i>Analytical Biochemistry</i> , 1999 , 272, 64-70	3.1	89
2	Fluid mechanics of arterial stenosis: relationship to the development of mural thrombus. <i>Annals of Biomedical Engineering</i> , 1997 , 25, 344-56	4.7	191
1	A squeeze flow phenomenon at the closing of a bileaflet mechanical heart valve prosthesis. <i>Journal of Biomechanics</i> , 1994 , 27, 1369-78	2.9	59