

# Luca Ded

## 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.

80  
papers

1,545  
citations

20  
h-index

37  
g-index

85  
ext. papers

2,004  
ext. citations

3.6  
avg, IF

5.5  
L-index

#	Paper	IF	Citations
80	3DDD closed-loop model for the simulation of cardiac biventricular electromechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2022</b> , 391, 114607	5.7	2
79	The role of mechano-electric feedbacks and hemodynamic coupling in scar-related ventricular tachycardia.. <i>Computers in Biology and Medicine</i> , <b>2022</b> , 142, 105203	7	3
78	A geometric multiscale model for the numerical simulation of blood flow in the human left heart. <i>Discrete and Continuous Dynamical Systems - Series S</i> , <b>2022</b> ,	2.8	1
77	Slow Conduction Corridors and Pivot Sites Characterize the Electrical Remodeling in Atrial Fibrillation.. <i>JACC: Clinical Electrophysiology</i> , <b>2022</b> , 8, 561-577	4.6	0
76	Modelling the COVID-19 epidemic and the vaccination campaign in Italy by the SUIHTER model.. <i>Infectious Disease Modelling</i> , <b>2022</b> , 7, 45-63	15.7	1
75	A machine learning approach to enhance the SUPG stabilization method for advection-dominated differential problems. <i>Mathematics in Engineering</i> , <b>2022</b> , 5, 1-26	1.2	0
74	Non intrusive reduced order modeling of parametrized PDEs by kernel POD and neural networks. <i>Computers and Mathematics With Applications</i> , <b>2021</b> , 104, 1-13	2.7	1
73	Characterization of cardiac electrogram signals in atrial arrhythmias. <i>Minerva Cardiology and Angiology</i> , <b>2021</b> , 69, 70-80	2.4	
72	Multipatch Isogeometric Analysis for electrophysiology: Simulation in a human heart. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2021</b> , 376, 113666	5.7	9
71	A Comprehensive Deep Learning-Based Approach to Reduced Order Modeling of Nonlinear Time-Dependent Parametrized PDEs. <i>Journal of Scientific Computing</i> , <b>2021</b> , 87, 1	2.3	30
70	A Computational Study of the Electrophysiological Substrate in Patients Suffering From Atrial Fibrillation. <i>Frontiers in Physiology</i> , <b>2021</b> , 12, 673612	4.6	1
69	Mathematical and numerical models for the cardiac electromechanical function. <i>Atti Della Accademia Nazionale Dei Lincei, Classe Di Scienze Fisiche, Matematiche E Naturali, Rendiconti Lincei Matematica E Applicazioni</i> , <b>2021</b> , 32, 233-272	0.7	1
68	Computational fluid dynamics of blood flow in an idealized left human heart. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2021</b> , 37, e3287	2.6	6
67	Modeling cardiac muscle fibers in ventricular and atrial electrophysiology simulations. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2021</b> , 373, 113468	5.7	21
66	Mathematical analysis and numerical approximation of a general linearized poro-hyperelastic model. <i>Computers and Mathematics With Applications</i> , <b>2021</b> , 91, 202-228	2.7	1
65	Active Force Generation in Cardiac Muscle Cells: Mathematical Modeling and Numerical Simulation of the Actin-Myosin Interaction. <i>Vietnam Journal of Mathematics</i> , <b>2021</b> , 49, 87-118	0.5	5
64	Modeling the cardiac response to hemodynamic changes associated with COVID-19: a computational study. <i>Mathematical Biosciences and Engineering</i> , <b>2021</b> , 18, 3364-3383	2.1	1

63	Data integration for the numerical simulation of cardiac electrophysiology. <i>PACE - Pacing and Clinical Electrophysiology</i> , <b>2021</b> , 44, 726-736	1.6	4
62	A mathematical dashboard for the analysis of Italian COVID-19 epidemic data. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2021</b> , 37, e3513	2.6	2
61	POD-Enhanced Deep Learning-Based Reduced Order Models for the Real-Time Simulation of Cardiac Electrophysiology in the Left Atrium. <i>Frontiers in Physiology</i> , <b>2021</b> , 12, 679076	4.6	4
60	Hemodynamics of the heart's left atrium based on a Variational Multiscale-LES numerical method. <i>European Journal of Mechanics, B/Fluids</i> , <b>2021</b> , 89, 380-400	2.4	6
59	SUIHTER: a new mathematical model for COVID-19. Application to the analysis of the second epidemic outbreak in Italy.. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2021</b> , 477, 20210027	2.4	5
58	Electromechanical modeling of human ventricles with ischemic cardiomyopathy: numerical simulations in sinus rhythm and under arrhythmia. <i>Computers in Biology and Medicine</i> , <b>2021</b> , 136, 104674	7	7
57	Outer loop and isthmus in ventricular tachycardia circuits: Characteristics and implications. <i>Heart Rhythm</i> , <b>2020</b> , 17, 1719-1728	6.7	11
56	An intergrid transfer operator using radial basis functions with application to cardiac electromechanics. <i>Computational Mechanics</i> , <b>2020</b> , 66, 491-511	4	8
55	Machine learning of multiscale active force generation models for the efficient simulation of cardiac electromechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2020</b> , 370, 113268	5.7	21
54	A Computational Comparison Between Isogeometric Analysis and Spectral Element Methods: Accuracy and Spectral Properties. <i>Journal of Scientific Computing</i> , <b>2020</b> , 83, 1	2.3	3
53	A Proof of Concept for Computational Fluid Dynamic Analysis of the Left Atrium in Atrial Fibrillation on a Patient-Specific Basis. <i>Journal of Biomechanical Engineering</i> , <b>2020</b> , 142,	2.1	18
52	Biophysically detailed mathematical models of multiscale cardiac active mechanics. <i>PLoS Computational Biology</i> , <b>2020</b> , 16, e1008294	5	17
51	Deep learning-based reduced order models in cardiac electrophysiology. <i>PLoS ONE</i> , <b>2020</b> , 15, e0239416	3.7	18
50	Effect of fibre orientation and bulk modulus on the electromechanical modelling of human ventricles. <i>Mathematics in Engineering</i> , <b>2020</b> , 2, 614-638	1.2	5
49	Segregated Algorithms for the Numerical Simulation of Cardiac Electromechanics in the Left Human Ventricle. <i>Lecture Notes in Mathematics</i> , <b>2020</b> , 81-116	0.4	2
48	An image-based computational hemodynamics study of the Systolic Anterior Motion of the mitral valve. <i>Computers in Biology and Medicine</i> , <b>2020</b> , 123, 103922	7	6
47	Basic facts about quantitative physiology <b>2019</b> , 3-9		
46	Modelling blood flow <b>2019</b> , 25-76		

45 Modelling the heart **2019**, 102-152

44 Parameter estimation from clinical data **2019**, 178-202

43 Accounting for uncertainty **2019**, 203-224

42 Reduced-order modelling **2019**, 225-234

41 Machine learning for fast and reliable solution of time-dependent differential equations. *Journal of Computational Physics*, **2019**, 397, 108852 4.1 28

40 Mathematical Modelling of the Human Cardiovascular System: Data, Numerical Approximation, Clinical Applications **2019**, 24

39 Isogeometric Analysis of the electrophysiology in the human heart: Numerical simulation of the bidomain equations on the atria. *Computer Methods in Applied Mechanics and Engineering*, **2019**, 343, 52-73 5.7 15

38 Biomembrane modeling with isogeometric analysis. *Computer Methods in Applied Mechanics and Engineering*, **2019**, 347, 103-119 5.7 3

37 The Impact of Left Atrium Appendage Morphology on Stroke Risk Assessment in Atrial Fibrillation: A Computational Fluid Dynamics Study. *Frontiers in Physiology*, **2018**, 9, 1938 4.6 38

36 Active contraction of cardiac cells: a reduced model for sarcomere dynamics with cooperative interactions. *Biomechanics and Modeling in Mechanobiology*, **2018**, 17, 1663-1686 3.8 13

35 Isogeometric Analysis of a Phase Field Model for Darcy Flows with Discontinuous Data. *Chinese Annals of Mathematics Series B*, **2018**, 39, 487-512 0.4 2

34 A monolithic algorithm for the simulation of cardiac electromechanics in the human left ventricle. *Mathematics in Engineering*, **2018**, 1, 1-37 1.2 25

33 A Hele-Shaw-Cahn-Hilliard Model for Incompressible Two-Phase Flows with Different Densities. *Journal of Mathematical Fluid Mechanics*, **2018**, 20, 531-567 1.4 19

32 A transmurally heterogeneous orthotropic activation model for ventricular contraction and its numerical validation. *International Journal for Numerical Methods in Biomedical Engineering*, **2018**, 34, e3137 2.6 7

31 Numerical approximation of the electromechanical coupling in the left ventricle with inclusion of the Purkinje network. *International Journal for Numerical Methods in Biomedical Engineering*, **2018**, 34, e2984 2.6 10

30 Isogeometric analysis and proper orthogonal decomposition for parabolic problems. *Numerische Mathematik*, **2017**, 135, 333-370 2.2 15

29 Isogeometric approximation of cardiac electrophysiology models on surfaces: An accuracy study with application to the human left atrium. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 317, 248-273 5.7 18

28 Fluid dynamics of an idealized left ventricle: the extended Nitsche's method for the treatment of heart valves as mixed time varying boundary conditions. *International Journal for Numerical Methods in Fluids*, **2017**, 85, 135-164 1.9 15

27	Complex blood flow patterns in an idealized left ventricle: A numerical study. <i>Chaos</i> , <b>2017</b> , 27, 093939	3.3	13
26	A patient-specific aortic valve model based on moving resistive immersed implicit surfaces. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2017</b> , 16, 1779-1803	3.8	23
25	Isogeometric analysis and proper orthogonal decomposition for the acoustic wave equation. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , <b>2017</b> , 51, 1197-1221	1.8	9
24	A Patient-Specific Computational Fluid Dynamics Model of the Left Atrium in Atrial Fibrillation: Development and Initial Evaluation. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 392-400	0.9	5
23	IGS: An IsoGeometric approach for smoothing on surfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2016</b> , 302, 70-89	5.7	15
22	A numerical study of isotropic and anisotropic constitutive models with relevance to healthy and unhealthy cerebral arterial tissues. <i>International Journal of Engineering Science</i> , <b>2016</b> , 101, 126-155	5.7	15
21	Nitsche's method for parabolic partial differential equations with mixed time varying boundary conditions. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , <b>2016</b> , 50, 541-563	1.8	3
20	Isogeometric Analysis of geometric Partial Differential Equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2016</b> , 311, 625-647	5.7	6
19	Fluid-structure interaction simulations of cerebral arteries modeled by isotropic and anisotropic constitutive laws. <i>Computational Mechanics</i> , <b>2015</b> , 55, 479-498	4	13
18	Isogeometric Analysis of high order Partial Differential Equations on surfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2015</b> , 295, 446-469	5.7	61
17	Semi-implicit BDF time discretization of the Navier-Stokes equations with VMS-LES modeling in a High Performance Computing framework. <i>Computers and Fluids</i> , <b>2015</b> , 117, 168-182	2.8	46
16	Isogeometric rotation-free analysis of planar extensible-elastica for static and dynamic applications. <i>Nonlinear Dynamics</i> , <b>2015</b> , 81, 77-96	5	24
15	Isogeometric Analysis for second order Partial Differential Equations on surfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2015</b> , 284, 807-834	5.7	29
14	Isogeometric numerical dispersion analysis for two-dimensional elastic wave propagation. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2015</b> , 284, 320-348	5.7	40
13	Well-Posedness, Regularity, and Convergence Analysis of the Finite Element Approximation of a Generalized Robin Boundary Value Problem. <i>SIAM Journal on Numerical Analysis</i> , <b>2015</b> , 53, 105-126	2.4	19
12	Isogeometric Analysis and error estimates for high order partial differential equations in fluid dynamics. <i>Computers and Fluids</i> , <b>2014</b> , 102, 277-303	2.8	66
11	Isogeometric analysis of the advective Cahn-Hilliard equation: Spinodal decomposition under shear flow. <i>Journal of Computational Physics</i> , <b>2013</b> , 242, 321-350	4.1	77
10	Reduced Basis Method and Error Estimation for Parametrized Optimal Control Problems with Control Constraints. <i>Journal of Scientific Computing</i> , <b>2012</b> , 50, 287-305	2.3	18

9	B-spline goal-oriented error estimators for geometrically nonlinear rods. <i>Computational Mechanics</i> , <b>2012</b> , 49, 35-52	4	18
8	Isogeometric Analysis for Topology Optimization with a Phase Field Model. <i>Archives of Computational Methods in Engineering</i> , <b>2012</b> , 19, 427-465	7.8	173
7	An isogeometric design-through-analysis methodology based on adaptive hierarchical refinement of NURBS, immersed boundary methods, and T-spline CAD surfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2012</b> , 249-252, 116-150	5.7	312
6	Reduced Basis Method for Parametrized Elliptic Advection-Reaction Problems. <i>Journal of Computational Mathematics</i> , <b>2010</b> , 28, 122-148	2.1	6
5	Reduced Basis Method and A Posteriori Error Estimation for Parametrized Linear-Quadratic Optimal Control Problems. <i>SIAM Journal of Scientific Computing</i> , <b>2010</b> , 32, 997-1019	2.6	29
4	Anisotropic error control for environmental applications. <i>Applied Numerical Mathematics</i> , <b>2008</b> , 58, 1320-1339	3.9	17
3	Optimal flow control for Navier-Stokes equations: drag minimization. <i>International Journal for Numerical Methods in Fluids</i> , <b>2007</b> , 55, 347-366	1.9	20
2	Numerical Approximation of a Control Problem for Advection-Diffusion Processes <b>2005</b> , 261-273		3
1	Optimal control and numerical adaptivity for advection-diffusion equations. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , <b>2005</b> , 39, 1019-1040	1.8	31