

# Stefano Berrone

## List of Publications by Year in descending order

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68  
papers

1,381  
citations

361413

20  
h-index

361022

35  
g-index

68  
all docs

68  
docs citations

68  
times ranked

582  
citing authors

#	ARTICLE	IF	CITATIONS
1	Anisotropic <i>a posteriori</i> error estimate for the virtual element method. IMA Journal of Numerical Analysis, 2022, 42, 1273-1312.	2.9	9
2	3D-1D coupling on non conforming meshes via a three-field optimization based domain decomposition. Journal of Computational Physics, 2022, 448, 110738.	3.8	7
3	A virtual element method for the two-phase flow of immiscible fluids in porous media. Computational Geosciences, 2022, 26, 195-216.	2.4	5
4	Graph-Informed Neural Networks for Regressions on Graph-Structured Data. Mathematics, 2022, 10, 786.	2.2	5
5	A gradient based resolution strategy for a PDE-constrained optimization approach for 3D-1D coupled problems. GEM - International Journal on Geomathematics, 2022, 13, 1.	1.6	2
6	A new quality preserving polygonal mesh refinement algorithm for Polygonal Element Methods. Finite Elements in Analysis and Design, 2022, 207, 103770.	3.2	4
7	Efficient partitioning of conforming virtual element discretizations for large scale discrete fracture network flow parallel solvers. Engineering Geology, 2022, 306, 106747.	6.3	5
8	Geological surface reconstruction from 3D point clouds. MethodsX, 2021, 8, 101398.	1.6	5
9	A Three-field Based Optimization Formulation for Flow Simulations in Networks of Fractures on Nonconforming Meshes. SIAM Journal of Scientific Computing, 2021, 43, B381-B404.	2.8	5
10	An optimization approach for flow simulations in poro-fractured media with complex geometries. Computational Geosciences, 2021, 25, 897-910.	2.4	6
11	Performance Analysis of Multi-Task Deep Learning Models for Flux Regression in Discrete Fracture Networks. Geosciences (Switzerland), 2021, 11, 131.	2.2	2
12	Refinement strategies for polygonal meshes applied to adaptive VEM discretization. Finite Elements in Analysis and Design, 2021, 186, 103502.	3.2	12
13	Machine learning for flux regression in discrete fracture networks. GEM - International Journal on Geomathematics, 2021, 12, 1.	1.6	5
14	A Reduced Basis Method for a PDE-constrained optimization formulation in Discrete Fracture Network flow simulations. Computers and Mathematics With Applications, 2021, 99, 182-194.	2.7	1
15	Layer-wise relevance propagation for backbone identification in discrete fracture networks. Journal of Computational Science, 2021, 55, 101458.	2.9	2
16	A robust VEM-based approach for flow simulations in poro-fractured media. Mathematical Models and Methods in Applied Sciences, 2021, 31, 2855-2885.	3.3	3
17	Multilevel Monte Carlo Predictions of First Passage Times in Three-Dimensional Discrete Fracture Networks: A Graph-Based Approach. Water Resources Research, 2020, 56, e2019WR026493.	4.2	10
18	Parallel Meshing, Discretization, and Computation of Flow in Massive Discrete Fracture Networks. SIAM Journal of Scientific Computing, 2019, 41, C317-C338.	2.8	22

#	ARTICLE	IF	CITATIONS
19	Fast and robust flow simulations in discrete fracture networks with GPCPUs. GEM - International Journal on Geomathematics, 2019, 10, 1.	1.6	8
20	Reliable a posteriori mesh adaptivity in Discrete Fracture Network flow simulations. Computer Methods in Applied Mechanics and Engineering, 2019, 354, 904-931.	6.6	12
21	An optimal adaptive Fictitious Domain Method. Mathematics of Computation, 2019, 88, 2101-2134.	2.1	6
22	The Virtual Element Method for the Transport of Passive Scalars in Discrete Fracture Networks. Lecture Notes in Computational Science and Engineering, 2019, , 501-508.	0.3	0
23	New Strategies for the Simulation of the Flow in Three Dimensional Poro-Fractured Media. Lecture Notes in Computational Science and Engineering, 2019, , 715-723.	0.3	0
24	The Virtual Element Method on Anisotropic Polygonal Discretizations. Lecture Notes in Computational Science and Engineering, 2019, , 725-733.	0.3	5
25	Uncertainty Quantification in Discrete Fracture Network Models: Stochastic Geometry. Water Resources Research, 2018, 54, 1338-1352.	4.2	26
26	Unsteady advection-diffusion simulations in complex Discrete Fracture Networks with an optimization approach. Journal of Hydrology, 2018, 566, 332-345.	5.4	18
27	Advanced computation of steady-state fluid flow in Discrete Fracture-Matrix models: FEM-BEM and VEM-VEM fracture-block coupling. GEM - International Journal on Geomathematics, 2018, 9, 377-399.	1.6	14
28	SUPG stabilization for the nonconforming virtual element method for advection-diffusion-reaction equations. Computer Methods in Applied Mechanics and Engineering, 2018, 340, 500-529.	6.6	42
29	Non-stationary transport phenomena in networks of fractures: Effective simulations and stochastic analysis. Computer Methods in Applied Mechanics and Engineering, 2017, 315, 1098-1112.	6.6	20
30	Orthogonal polynomials in badly shaped polygonal elements for the Virtual Element Method. Finite Elements in Analysis and Design, 2017, 129, 14-31.	3.2	52
31	A residual a posteriori error estimate for the Virtual Element Method. Mathematical Models and Methods in Applied Sciences, 2017, 27, 1423-1458.	3.3	37
32	Flow simulations in porous media with immersed intersecting fractures. Journal of Computational Physics, 2017, 345, 768-791.	3.8	22
33	A Posteriori Error Estimate for a PDE-Constrained Optimization Formulation for the Flow in DFNs. SIAM Journal on Numerical Analysis, 2016, 54, 242-261.	2.3	25
34	Towards effective flow simulations in realistic discrete fracture networks. Journal of Computational Physics, 2016, 310, 181-201.	3.8	31
35	Order preserving SUPG stabilization for the virtual element formulation of advection-diffusion problems. Computer Methods in Applied Mechanics and Engineering, 2016, 311, 18-40.	6.6	83
36	An Adaptive Fictitious Domain Method for Elliptic Problems. SEMA SIMAI Springer Series, 2016, , 229-244.	0.7	2

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37	The Virtual Element Method for Underground Flow Simulations in Fractured Media. SEMA SIMAI Springer Series, 2016, , 167-186.	0.7	9
38	Macroscopic First Order Models of Multicomponent Human Crowds with Behavioral Dynamics. Modeling and Simulation in Science, Engineering and Technology, 2016, , 295-306.	0.6	6
39	A hybrid mortar virtual element method for discrete fracture network simulations. Journal of Computational Physics, 2016, 306, 148-166.	3.8	91
40	A globally conforming method for solving flow in discrete fracture networks using the Virtual Element Method. Finite Elements in Analysis and Design, 2016, 109, 23-36.	3.2	69
41	THE VIRTUAL ELEMENT METHOD FOR DISCRETE FRACTURE NETWORK FLOW AND TRANSPORT SIMULATIONS. , 2016, , .		2
42	The Virtual Element Method for large scale Discrete Fracture Network simulations: fracture-independent mesh generation. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 19-22.	0.2	5
43	A Parallel Solver for Large Scale DFN Flow Simulations. SIAM Journal of Scientific Computing, 2015, 37, C285-C306.	2.8	54
44	Efficient combustion parameter prediction and performance optimization for a diesel engine with a low throughput combustion model. Energy Conversion and Management, 2015, 96, 105-114.	9.2	8
45	Uncertainty quantification in Discrete Fracture Network models: Stochastic fracture transmissivity. Computers and Mathematics With Applications, 2015, 70, 603-623.	2.7	25
46	Simulation of the Steady-State Flow in Discrete Fracture Networks with Non-Conforming Meshes and Extended Finite Elements. Rock Mechanics and Rock Engineering, 2014, 47, 2171-2182.	5.4	19
47	The virtual element method for discrete fracture network simulations. Computer Methods in Applied Mechanics and Engineering, 2014, 280, 135-156.	6.6	163
48	An optimization approach for large scale simulations of discrete fracture network flows. Journal of Computational Physics, 2014, 256, 838-853.	3.8	63
49	A PDE-Constrained Optimization Formulation for Discrete Fracture Network Flows. SIAM Journal of Scientific Computing, 2013, 35, B487-B510.	2.8	78
50	On Simulations of Discrete Fracture Network Flows with an Optimization-Based Extended Finite Element Method. SIAM Journal of Scientific Computing, 2013, 35, A908-A935.	2.8	57
51	Coupling traffic models on networks and urban dispersion models for simulating sustainable mobility strategies. Computers and Mathematics With Applications, 2012, 64, 1975-1991.	2.7	6
52	Numerical simulation of low-Reynolds number flows past rectangular cylinders based on adaptive finite element and finite volume methods. Computers and Fluids, 2011, 40, 92-112.	2.5	32
53	A new marking strategy for the adaptive finite element approximation of optimal control constrained problems. Optimization Methods and Software, 2011, 26, 747-775.	2.4	3
54	The Impact of the Urban Air Pollution on the Human Health: A Case-Study in Turin. NATO Science for Peace and Security Series C: Environmental Security, 2011, , 729-732.	0.2	5

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55	Numerical investigation of effectivity indices of space-time error indicators for Navier–Stokes equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010, 199, 1764-1782.	6.6	4
56	Skipping transition conditions in <i>a posteriori</i> error estimates for finite element discretizations of parabolic equations. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2010, 44, 455-484.	1.9	5
57	Space–time adaptive simulations for unsteady Navier–Stokes problems. <i>Computers and Fluids</i> , 2009, 38, 1132-1144.	2.5	32
58	A Local-in-Space-Timestep Approach to a Finite Element Discretization of the Heat Equation with a <i>Posteriori</i> Estimates. <i>SIAM Journal on Numerical Analysis</i> , 2009, 47, 3109-3138.	2.3	8
59	Two-sided <i>a posteriori</i> error bounds for incompressible quasi-Newtonian flows. <i>IMA Journal of Numerical Analysis</i> , 2007, 28, 382-421.	2.9	9
60	Globalization strategies for Newton–Krylov methods for stabilized FEM discretization of Navier–Stokes equations. <i>Journal of Computational Physics</i> , 2007, 226, 2317-2340.	3.8	10
61	An Adaptive WEM Algorithm for Solving Elliptic Boundary Value Problems in Fairly General Domains. <i>SIAM Journal of Scientific Computing</i> , 2006, 28, 2114-2138.	2.8	11
62	Robusta <i>posteriori</i> error estimates for finite element discretizations of the heat equation with discontinuous coefficients. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2006, 40, 991-1021.	1.9	16
63	Multilevel <i>a posteriori</i> error analysis for reaction–convection–diffusion problems. <i>Applied Numerical Mathematics</i> , 2004, 50, 371-394.	2.1	7
64	Robustness in <i>a posteriori</i> error estimates for the Oseen equations with general boundary conditions. , 2003, , 657-668.		0
65	A REALIZATION OF A WAVELET GALERKIN METHOD ON NONTRIVIAL DOMAINS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2002, 12, 1525-1554.	3.3	6
66	Robustness in <i>a posteriori</i> error analysis for FEM flow models. <i>Numerische Mathematik</i> , 2002, 91, 389-422.	1.9	18
67	Towards a Realization of a Wavelet Galerkin Method on Non-Trivial Domains. <i>Journal of Scientific Computing</i> , 2002, 17, 307-317.	2.3	4
68	Adaptive discretization of stationary and incompressible Navier–Stokes equations by stabilized finite element methods. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001, 190, 4435-4455.	6.6	43