

Colin Cotter

List of Publications by Year in descending order

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Version: 2024-02-01

57
papers

1,397
citations

394421

19
h-index

395702

33
g-index

60
all docs

60
docs citations

60
times ranked

893
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1 | Calibration, inversion and sensitivity analysis for hydro-morphodynamic models through the application of adjoint methods. <i>Computers and Geosciences</i> , 2022, 163, 105104. | 4.2 | 5 |
| 2 | Assessing erosion and flood risk in the coastal zone through the application of multilevel Monte Carlo methods. <i>Coastal Engineering</i> , 2022, 174, 104118. | 4.0 | 8 |
| 3 | Multi-scale hydro-morphodynamic modelling using mesh movement methods. <i>GEM - International Journal on Geomathematics</i> , 2022, 13, 1. | 1.6 | 3 |
| 4 | Hydro-morphodynamics 2D modelling using a discontinuous Galerkin discretisation. <i>Computers and Geosciences</i> , 2021, 146, 104658. | 4.2 | 6 |
| 5 | Perspectives on the formation of peakons in the stochastic Camassa-Holm equation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, . | 2.1 | 4 |
| 6 | A Structure-Preserving Approximation of the Discrete Split Rotating Shallow Water Equations. <i>Lecture Notes in Computational Science and Engineering</i> , 2021, , 103-113. | 0.3 | 0 |
| 7 | Energy conserving upwinded compatible finite element schemes for the rotating shallow water equations. <i>Journal of Computational Physics</i> , 2020, 401, 109016. | 3.8 | 14 |
| 8 | Slate: extending Firedrake's domain-specific abstraction to hybridized solvers for geoscience and beyond. <i>Geoscientific Model Development</i> , 2020, 13, 735-761. | 3.6 | 11 |
| 9 | A compatible finite element discretisation for the moist compressible Euler equations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2020, 146, 3187-3205. | 2.7 | 9 |
| 10 | Data Assimilation for a Quasi-Geostrophic Model with Circulation-Preserving Stochastic Transport Noise. <i>Journal of Statistical Physics</i> , 2020, 179, 1186-1221. | 1.2 | 22 |
| 11 | The r-Hunter-Saxton equation, smooth and singular solutions and their approximation. <i>Nonlinearity</i> , 2020, 33, 7016-7039. | 1.4 | 4 |
| 12 | A Particle Filter for Stochastic Advection by Lie Transport: A Case Study for the Damped and Forced Incompressible Two-Dimensional Euler Equation. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2020, 8, 1446-1492. | 2.0 | 20 |
| 13 | Statistical properties of an enstrophy conserving finite element discretisation for the stochastic quasi-geostrophic equation. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2019, 113, 491-504. | 1.2 | 2 |
| 14 | Numerically Modeling Stochastic Lie Transport in Fluid Dynamics. <i>Multiscale Modeling and Simulation</i> , 2019, 17, 192-232. | 1.6 | 65 |
| 15 | The "recovered space"™ advection scheme for lowest-order compatible finite element methods. <i>Journal of Computational Physics</i> , 2019, 390, 342-358. | 3.8 | 4 |
| 16 | A mixed finite element, finite volume, semi-implicit discretization for atmospheric dynamics: Cartesian geometry. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2019, 145, 2835-2853. | 2.7 | 26 |
| 17 | Choice of function spaces for thermodynamic variables in mixed finite element methods. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2018, 144, 900-916. | 2.7 | 9 |
| 18 | A variational $H(\text{div})$ finite-element discretization approach for perfect incompressible fluids. <i>IMA Journal of Numerical Analysis</i> , 2018, 38, 1388-1419. | 2.9 | 23 |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Higher-order compatible finite element schemes for the nonlinear rotating shallow water equations on the sphere. <i>Journal of Computational Physics</i> , 2018, 375, 1121-1137. | 3.8 | 22 |
| 20 | The scaling and skewness of optimally transported meshes on the sphere. <i>Journal of Computational Physics</i> , 2018, 375, 540-564. | 3.8 | 10 |
| 21 | Corrigendum to: A variational $\mathbf{H}(\text{m div})$ finite-element discretization approach for perfect incompressible fluids. <i>IMA Journal of Numerical Analysis</i> , 2018, 38, 1084-1084. | 2.9 | 4 |
| 22 | Energy- and enstrophy conserving compatible finite element schemes for the rotating shallow water equations with slip boundary conditions. <i>Journal of Computational Physics</i> , 2018, 373, 171-187. | 3.8 | 26 |
| 23 | Mixed finite elements for global tide models with nonlinear damping. <i>Numerische Mathematik</i> , 2018, 140, 963-991. | 1.9 | 2 |
| 24 | Optimal-Transport-Based Mesh Adaptivity on the Plane and Sphere Using Finite Elements. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, A1121-A1148. | 2.8 | 16 |
| 25 | Scale-selective dissipation in energy-conserving finite-element schemes for two-dimensional turbulence. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2017, 143, 1734-1745. | 2.7 | 12 |
| 26 | Vertical slice modelling of nonlinear Eady waves using a compatible finite element method. <i>Journal of Computational Physics</i> , 2017, 343, 130-149. | 3.8 | 8 |
| 27 | Compatible finite element spaces for geophysical fluid dynamics. <i>Dynamics and Statistics of the Climate System</i> , 2016, 1, . | 0.8 | 12 |
| 28 | Simulating tidal turbines with multi-scale mesh optimisation techniques. <i>Journal of Fluids and Structures</i> , 2016, 66, 69-90. | 3.4 | 30 |
| 29 | Mixed finite elements for global tide models. <i>Numerische Mathematik</i> , 2016, 133, 255-277. | 1.9 | 4 |
| 30 | Embedded discontinuous Galerkin transport schemes with localised limiters. <i>Journal of Computational Physics</i> , 2016, 311, 363-373. | 3.8 | 18 |
| 31 | An adaptive selective frequency damping method. <i>Physics of Fluids</i> , 2015, 27, 094104. | 4.0 | 24 |
| 32 | A primal-dual mimetic finite element scheme for the rotating shallow water equations on polygonal spherical meshes. <i>Journal of Computational Physics</i> , 2015, 290, 274-297. | 3.8 | 34 |
| 33 | A two-dimensional mixed finite-element pair on rectangles. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 930-942. | 2.7 | 10 |
| 34 | Encapsulated formulation of the selective frequency damping method. <i>Physics of Fluids</i> , 2014, 26, . | 4.0 | 41 |
| 35 | A finite element exterior calculus framework for the rotating shallow-water equations. <i>Journal of Computational Physics</i> , 2014, 257, 1506-1526. | 3.8 | 64 |
| 36 | Energy- and enstrophy-conserving schemes for the shallow-water equations, based on mimetic finite elements. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 2223-2234. | 2.7 | 41 |

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|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 37 | Analysis of a mixed finite element pair proposed for an atmospheric dynamical core. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 1239-1254. | 2.7 | 18 |
| 38 | Data assimilation on the exponentially accurate slow manifold. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120300. | 3.4 | 12 |
| 39 | Computational Modes and Grid Imprinting on Five Quasi-Uniform Spherical C Grids. Monthly Weather Review, 2012, 140, 2734-2755. | 1.4 | 49 |
| 40 | Mixed finite elements for numerical weather prediction. Journal of Computational Physics, 2012, 231, 7076-7091. | 3.8 | 85 |
| 41 | A Reparameterisation Based Approach to Geodesic Constrained Solvers for Curve Matching. International Journal of Computer Vision, 2012, 99, 103-121. | 15.6 | 9 |
| 42 | Diffeomorphic 3D Image Registration via Geodesic Shooting Using an Efficient Adjoint Calculation. International Journal of Computer Vision, 2012, 97, 229-241. | 15.6 | 146 |
| 43 | Geostrophic balance preserving interpolation in mesh adaptive linearised shallow-water ocean modelling. Ocean Modelling, 2011, 37, 35-48. | 2.4 | 3 |
| 44 | Numerical wave propagation for the triangular P1 - P2 finite element pair. Journal of Computational Physics, 2011, 230, 2806-2820. | 3.8 | 39 |
| 45 | Variational water-wave model with accurate dispersion and vertical vorticity. Journal of Engineering Mathematics, 2010, 67, 33-54. | 1.2 | 12 |
| 46 | Solving the Poisson equation on small aspect ratio domains using unstructured meshes. Ocean Modelling, 2010, 35, 253-263. | 2.4 | 14 |
| 47 | Geodesic boundary value problems with symmetry. Journal of Geometric Mechanics, 2010, 2, 51-68. | 0.8 | 6 |
| 48 | Continuous and Discrete Clebsch Variational Principles. Foundations of Computational Mathematics, 2009, 9, 221-242. | 2.5 | 23 |
| 49 | A mixed discontinuous/continuous finite element pair for shallow-water ocean modelling. Ocean Modelling, 2009, 26, 86-90. | 2.4 | 70 |
| 50 | LBB stability of a mixed Galerkin finite element pair for fluid flow simulations. Journal of Computational Physics, 2009, 228, 336-348. | 3.8 | 52 |
| 51 | Estimating eddy diffusivities from noisy Lagrangian observations. Communications in Mathematical Sciences, 2009, 7, 805-838. | 1.0 | 12 |
| 52 | Diagnostic tools for 3D unstructured oceanographic data. Ocean Modelling, 2008, 20, 170-182. | 2.4 | 4 |
| 53 | Multisymplectic formulation of fluid dynamics using the inverse map. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 2671-2687. | 2.1 | 39 |
| 54 | Semigeostrophic Particle Motion and Exponentially Accurate Normal forms. Multiscale Modeling and Simulation, 2006, 5, 476-496. | 1.6 | 16 |

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|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Geometric integration of a wave-vortex model. <i>Applied Numerical Mathematics</i> , 2004, 48, 293-305. | 2.1 | 2 |
| 56 | Hamiltonian Particle-Mesh Method for Two-Layer Shallow-Water Equations Subject to the Rigid-Lid Approximation. <i>SIAM Journal on Applied Dynamical Systems</i> , 2004, 3, 69-83. | 1.6 | 13 |
| 57 | Energy conserving SUPG methods for compatible finite element schemes in numerical weather prediction. <i>SMAI Journal of Computational Mathematics</i> , 0, 7, 267-300. | 0.0 | 3 |