## Josep de la Puente

List of Publications by Year in descending order

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| #  | Article   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | An arbitrary high-order Discontinuous Galerkin method for elastic waves on unstructured meshes -<br>III. Viscoelastic attenuation. Geophysical Journal International, 2007, 168, 224-242.             | 1.0 | 142       |
| 2  | A parallel finite-element method for three-dimensional controlled-source electromagnetic forward modelling. Geophysical Journal International, 2013, 193, 678-693.                                    | 1.0 | 126       |
| 3  | An arbitrary high-order discontinuous Galerkin method for elastic waves on unstructured meshes -<br>IV. Anisotropy. Geophysical Journal International, 2007, 169, 1210-1228.                          | 1.0 | 117       |
| 4  | Discontinuous Galerkin methods for wave propagation in poroelastic media. Geophysics, 2008, 73,<br>T77-T97.   | 1.4 | 112       |
| 5  | Threeâ€dimensional dynamic rupture simulation with a highâ€order discontinuous Galerkin method on<br>unstructured tetrahedral meshes. Journal of Geophysical Research, 2012, 117, .                   | 3.3 | 95        |
| 6  | Mimetic seismic wave modeling including topography on deformed staggered grids. Geophysics, 2014,<br>79, T125-T141.   | 1.4 | 85        |
| 7  | Arbitrary high-order finite volume schemes for seismic wave propagation on unstructured meshes in 2D and 3D. Geophysical Journal International, 2007, 171, 665-694.                                   | 1.0 | 70        |
| 8  | Dynamic rupture modeling on unstructured meshes using a discontinuous Galerkin method. Journal of Geophysical Research, 2009, 114, .  | 3.3 | 69        |
| 9  | Quantitative accuracy analysis of the discontinuous Galerkin method for seismic wave propagation.<br>Geophysical Journal International, 2008, 173, 990-999.   | 1.0 | 54        |
| 10 | Wavefield compression for adjoint methods in full-waveform inversion. Geophysics, 2016, 81,<br>R385-R397.   | 1.4 | 48        |
| 11 | PETGEM: A parallel code for 3D CSEM forward modeling using edge finite elements. Computers and Geosciences, 2018, 119, 123-136.   | 2.0 | 43        |
| 12 | Study of Rotational Ground Motion in the Near-Field Region. Bulletin of the Seismological Society of<br>America, 2009, 99, 1271-1286.   | 1.1 | 40        |
| 13 | A discrete representation of material heterogeneity for the finite-difference modelling of seismic wave propagation in a poroelastic medium. Geophysical Journal International, 2019, 216, 1072-1099. | 1.0 | 30        |
| 14 | Algebraic multigrid preconditioning within parallel finite-element solvers for 3-D electromagnetic modelling problems in geophysics. Geophysical Journal International, 2014, 197, 1442-1458.         | 1.0 | 29        |
| 15 | Parallel 3-D marine controlled-source electromagnetic modelling using high-order tetrahedral<br>Nédélec elements. Geophysical Journal International, 2019, 219, 39-65.                                | 1.0 | 29        |
| 16 | Finite-difference staggered grids in GPUs for anisotropic elastic wave propagation simulation.<br>Computers and Geosciences, 2014, 70, 181-189.   | 2.0 | 26        |
| 17 | Observations and Modeling of Rotational Signals in the P Coda: Constraints on Crustal Scattering.<br>Bulletin of the Seismological Society of America, 2009, 99, 1315-1332.                           | 1.1 | 21        |
| 18 | Rotational motions in homogeneous anisotropic elastic media. Geophysics, 2010, 75, D47-D56.   | 1.4 | 18        |

Josep de la Puente

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|----|---|-----|-----------|
| 19 | Application of acoustic full waveform inversion to retrieve high-resolution temperature and salinity profiles from synthetic seismic data. Journal of Geophysical Research, 2011, 116, .    | 3.3 | 18        |
| 20 | A probabilistic approach for seismic risk assessment based on vulnerability functions. Application to<br>Barcelona. Bulletin of Earthquake Engineering, 2019, 17, 1863-1890.                | 2.3 | 17        |
| 21 | Enabling dynamic and intelligent workflows for HPC, data analytics, and AI convergence. Future<br>Generation Computer Systems, 2022, 134, 414-429.  | 4.9 | 17        |
| 22 | Development and Validation of Software CRISIS to Perform Probabilistic Seismic Hazard Assessment with Emphasis on the Recent CRISIS2015. Computacion Y Sistemas, 2017, 21, .                | 0.2 | 14        |
| 23 | 3D magnetotelluric modeling using high-order tetrahedral Nédélec elements on massively parallel computing platforms. Computers and Geosciences, 2022, 160, 105030.                          | 2.0 | 14        |
| 24 | A nodal discontinuous Galerkin finite element method for the poroelastic wave equation.<br>Computational Geosciences, 2019, 23, 595-615.  | 1.2 | 11        |
| 25 | Seismic wave field modelling using high performance computing. , 2008, , .  |     | 6         |
| 26 | A stochastic rupture earthquake code based on the fiber bundle model (TREMOL v0.1): application to<br>Mexican subduction earthquakes. Geoscientific Model Development, 2019, 12, 1809-1831. | 1.3 | 6         |
| 27 | Acceleration strategies for elastic full waveform inversion workflows in 2D and 3D. Computational Geosciences, 2017, 21, 31-45.   | 1.2 | 5         |
| 28 | A Machine Learning Approach for Parameter Screening in Earthquake Simulation. , 2018, , .   |     | 5         |
| 29 | HPC Geophysical Electromagnetics: A Synthetic VTI Model with Complex Bathymetry. Energies, 2022, 15, 1272.  | 1.6 | 5         |
| 30 | Digital library for computational seismology. Eos, 2007, 88, 559-559.   | 0.1 | 4         |
| 31 | Real time visualization of thermohaline finestructure using Seismic Offset Groups. Methods in Oceanography, 2012, 3-4, 1-13.  | 1.5 | 4         |
| 32 | Probabilistic Assessment of Seismic Risk of Dwelling Buildings of Barcelona. Implication for theÂCity<br>Resilience. Resilient Cities, 2019, , 229-265.                                     | 0.6 | 4         |
| 33 | A Parallel Tool for Numerical Approximation of 3D Electromagnetic Surveys in Geophysics.<br>Computacion Y Sistemas, 2016, 20, .   | 0.2 | 4         |
| 34 | Evolution of the multifractal parameters along different steps of a seismic activity. The example of<br>Canterbury 2000–2018 (New Zealand). AIP Advances, 2020, 10, 115109.                 | 0.6 | 4         |
| 35 | Edge-based electric field formulation in 3D CSEM simulations: A parallel approach. , 2015, , .  |     | 3         |
| 36 | Sensitivity Analysis of Seismic Parameters in the Probabilistic Seismic Hazard Assessment (PSHA) for<br>Barcelona Applying the New R-CRISIS. Computacion Y Sistemas, 2018, 22, .            | 0.2 | 3         |

Josep de la Puente

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|----|---|-----|-----------|
| 37 | Choice of regularization in adjoint tomography based on two-dimensional synthetic tests.<br>Geophysical Journal International, 2015, 202, 787-799.                      | 1.0 | 2         |
| 38 | Toward an automatic full-wave inversion: Synthetic study cases. The Leading Edge, 2016, 35, 1047-1052.  | 0.4 | 2         |
| 39 | Comparison of expansion-based explicit time-integration schemes for acoustic wave propagation.<br>Geophysics, 2020, 85, T165-T178.                                      | 1.4 | 2         |
| 40 | Comparative analysis of a new assessment of the seismic risk of residential buildings of two districts of Barcelona. Natural Hazards, 2022, 110, 1649-1691.             | 1.6 | 2         |
| 41 | Generalized Elastic Staggered Grids on Multi-GPU Platforms. , 2012, , .   |     | 1         |
| 42 | Parallel and numerical issues of the edge finite element method for 3D controlled-source electromagnetic surveys. , 2015, , .   |     | 1         |
| 43 | 3D Viscoelastic Anisotropic Seismic Modeling with High-Order Mimetic Finite Differences. Lecture Notes in Computational Science and Engineering, 2015, , 217-225.       | 0.1 | 1         |
| 44 | Towards an efficient and reliable HPC software platform for 3d geophysical inversion. , 2016, , .   |     | 1         |
| 45 | Using power-model based preconditioners for 3D acoustic full waveform inversion. , 2013, , .  |     | 1         |
| 46 | Edge-based parallel framework for the simulation of 3d CSEM surveys. , 2016, , .  |     | 1         |
| 47 | Modeling active fault systems and seismic events by using a fiber bundle model – example case: the<br>Northridge aftershock sequence. Solid Earth, 2019, 10, 1519-1540. | 1.2 | 1         |
| 48 | Comparison of irregular cartesian finite difference methods for acoustic RTM. , 2011, , .   |     | 0         |
| 49 | 3D seismic modelling with topography using mimetic finite differences. , 2013, , .  |     | Ο         |
| 50 | Efficient parallel solutions to 3D electromagnetic problems using potentials. , 2013, , .   |     | 0         |
| 51 | Improving edge finite element assembly for geophysical electromagnetic modelling on shared-memory architectures. , 2016, , .  |     | Ο         |
| 52 | Elastic Full Waveform Inversion (FWI) of Reflection Data with a Phase Misfit Function.<br>Communications in Computer and Information Science, 2016, , 277-284.          | 0.4 | 0         |
| 53 | A parallel finiteâ€element method for 3â€D marine controlledâ€source electromagnetic forward modeling. ,<br>2011, , .   |     | 0         |
| 54 | Three-Dimensional CSEM Modelling on Unstructured Tetrahedral Meshes Using Edge Finite Elements.<br>Communications in Computer and Information Science, 2017, , 247-256. | 0.4 | 0         |

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|----|--|-----|-----------|
| 55 | Analysis of the Key Features of the Seismic Actions Due to the three Main Earthquakes of 11th of May 2011 in Lorca, Spain. Computacion Y Sistemas, 2019, 23, .   | 0.2 | 0         |
| 56 | Synthetic seismicity distribution in Guerrero–Oaxaca subduction zone, Mexico, and its implications on the role of asperities in Gutenberg–Richter law. Geoscientific Model Development, 2020, 13, 6361-6381. | 1.3 | 0         |