# Jose E Roman

List of Publications by Year
in descending order

| 61 papers | 1,257 citations | 686830<br>13 h-index | 360668<br>35 g-index |
|---|---|---|---|
| 66 all docs | 66 docs citations | 66 times ranked | 1427 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | A Parallel Structured Divide-and-Conquer Algorithm for Symmetric Tridiagonal Eigenvalue Problems. IEEE Transactions on Parallel and Distributed Systems, 2021, 32, 367-378. | 4.0 | 9 |
| 2 | KSPHPDDM and PCHPDDM: Extending PETSc with advanced Krylov methods and robust multilevel overlapping Schwarz preconditioners. Computers and Mathematics With Applications, 2021, 84, 277-295. | 1.4 | 16 |
| 3 | NEP. ACM Transactions on Mathematical Software, 2021, 47, 1-29. | 1.6 | 5 |
| 4 | Calculation of $\lambda$ modes of the multi-group neutron transport equation using the discrete ordinates and Finite Difference Method. Annals of Nuclear Energy, 2020, 137, 107077. | 0.9 | 10 |
| 5 | A polynomial Jacobi–Davidson solver with support for non-monomial bases and deflation. BIT Numerical Mathematics, 2020, 60, 295-318. | 1.0 | 4 |
| 6 | An extension of the Cayley transform method for a parameterized generalized inverse eigenvalue problem. Numerical Linear Algebra With Applications, 2020, 27, e2327. | 0.9 | 1 |
| 7 | Non-linear eigenvalue problems with GetDP and SLEPc: Eigenmode computations of frequency-dispersive photonic open structures. Computer Physics Communications, 2020, 257, 107509. | 3.0 | 11 |
| 8 | Inertia–based spectrum slicing for symmetric quadratic eigenvalue problems. Numerical Linear Algebra With Applications, 2020, 27, e2293. | 0.9 | 2 |
| 9 | ELSI — An open infrastructure for electronic structure solvers. Computer Physics Communications, 2020, 256, 107459. | 3.0 | 27 |
| 10 | Computation of scattering resonances in absorptive and dispersive media with applications to metal-dielectric nano-structures. Journal of Computational Physics, 2020, 407, 109220. | 1.9 | 7 |
| 11 | Calculation of multiple eigenvalues of the neutron diffusion equation discretized with a parallelized finite volume method. Progress in Nuclear Energy, 2018, 105, 271-278. | 1.3 | 3 |
| 12 | MPI-CUDA parallel linear solvers for block-tridiagonal matrices in the context of SLEPc's eigensolvers. Parallel Computing, 2018, 74, 118-135. | 1.3 | 4 |
| 13 | Parallel Direct Solution of the Covariance-Localized Ensemble Square Root Kalman Filter Equations with Matrix Functions. Monthly Weather Review, 2018, 146, 2819-2836. | 0.5 | 5 |
| 14 | Stellarator microinstabilities and turbulence at low magnetic shear. Journal of Plasma Physics, 2018, 84, . | 0.7 | 26 |
| 15 | SIESTA–SIPs: Massively parallel spectrum–slicing eigensolver for an *ab initio* molecular dynamics package. Journal of Computational Chemistry, 2018, 39, 1806-1814. | 1.5 | 7 |
| 16 | Verification of the Parallel Pin-Wise Core Simulator pCTF/PARCSv3.2 in Operational Control Rod Drop Transient Scenarios. Nuclear Science and Engineering, 2017, 187, 254-267. | 0.5 | 0 |
| 17 | Multigroup neutron diffusion equation with the finite volume method in reactors using MOX fuels. Journal of Nuclear Science and Technology, 2017, 54, 1251-1260. | 0.7 | 3 |
| 18 | A Krylov–Schur solution of the eigenvalue problem for the neutron diffusion equation discretized with the Raviart–Thomas method. Journal of Nuclear Science and Technology, 2017, 54, 1085-1094. | 0.7 | 7 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|-----|-----------|
| 19 | Numerical Integral Eigensolver for a Ring Region on the Complex Plane. Lecture Notes in Computational Science and Engineering, 2017, , 19-30. | 0.1 | 0 |
| 20 | Parallel Krylov Solvers for the Polynomial Eigenvalue Problem in SLEPc. SIAM Journal of Scientific Computing, 2016, 38, S385-S411. | 1.3 | 23 |
| 21 | On low-frequency variability of the midlatitude ocean gyres. Journal of Fluid Mechanics, 2016, 795, 423-442. | 1.4 | 13 |
| 22 | Design and implementation of Java bindings in Open MPI. Parallel Computing, 2016, 59, 1-20. | 1.3 | 23 |
| 23 | Optimized analysis of isotropic high-nuclearity spin clusters with GPU acceleration. Computer Physics Communications, 2016, 209, 70-78. | 3.0 | 1 |
| 24 | Assembly Discontinuity Factors for the Neutron Diffusion Equation discretized with the Finite Volume Method. Application to BWR. Annals of Nuclear Energy, 2016, 97, 76-85. | 0.9 | 8 |
| 25 | Restarted Q-Arnoldi-type methods exploiting symmetry in quadratic eigenvalue problems. BIT Numerical Mathematics, 2016, 56, 1213-1236. | 1.0 | 4 |
| 26 | Parallel iterative refinement in polynomial eigenvalue problems. Numerical Linear Algebra With Applications, 2016, 23, 730-745. | 0.9 | 1 |
| 27 | Control rod drop transient analysis with the coupled parallel code pCTF-PARCSv2.7. Annals of Nuclear Energy, 2016, 87, 308-317. | 0.9 | 8 |
| 28 | Development of a finite volume inter-cell polynomial expansion method for the neutron diffusion equation. Journal of Nuclear Science and Technology, 2016, 53, 1212-1223. | 0.7 | 6 |
| 29 | GPU Implementation of Krylov Solvers for Block-Tridiagonal Eigenvalue Problems. Lecture Notes in Computer Science, 2016, , 182-191. | 1.0 | 1 |
| 30 | Improving accuracy of parallel SLICOT model reduction routines for stable systems. , 2015, , . | | 0 |
| 31 | Memory-efficient Arnoldi algorithms for linearizations of matrix polynomials in Chebyshev basis. Numerical Linear Algebra With Applications, 2014, 21, 569-588. | 0.9 | 19 |
| 32 | A parallel implementation of Davidson methods for large-scale eigenvalue problems in SLEPc. ACM Transactions on Mathematical Software, 2014, 40, 1-29. | 1.6 | 11 |
| 33 | A Jacobiâ€"Davidson type method with a correction equation tailored for integral operators. Numerical Algorithms, 2013, 64, 85-103. | 1.1 | 0 |
| 34 | Harnessing GPU Power from High-level Libraries: Eigenvalues of Integral Operators with SLEPc. Procedia Computer Science, 2013, 18, 2591-2594. | 1.2 | 3 |
| 35 | Parallel finite element density functional computations exploiting grid refinement and subspace recycling. Computer Physics Communications, 2013, 184, 66-72. | 3.0 | 4 |
| 36 | Eigenvalue computations in the context of data-sparse approximations of integral operators. Journal of Computational and Applied Mathematics, 2013, 237, 171-181. | 1.1 | 0 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|-----|-----------|
| 37 | Towards the availability of Java bindings in open MPI. , 2013, , . | | 9 |
| 38 | Parallel Computation of 3-D Soil-Structure Interaction in Time Domain with a Coupled FEM/SBFEM Approach. Journal of Scientific Computing, 2012, 52, 446-467. | 1.1 | 36 |
| 39 | Strategies for spectrum slicing based on restarted Lanczos methods. Numerical Algorithms, 2012, 60, 279-295. | 1.1 | 21 |
| 40 | Multi-dimensional gyrokinetic parameter studies based on eigenvalue computations. Computer Physics Communications, 2012, 183, 922-930. | 3.0 | 13 |
| 41 | Computing subdominant unstable modes of turbulent plasma with a parallel Jacobiâ€"Davidson eigensolver. Concurrency Computation Practice and Experience, 2011, 23, 2179-2191. | 1.4 | 5 |
| 42 | LARGE SCALE SIMULATION OF WAVE PROPAGATION IN SOILS INTERACTING WITH STRUCTURES USING FEM AND SBFEM. Journal of Computational Acoustics, 2011, 19, 75-93. | 1.0 | 15 |
| 43 | Fast hopfield neural networks using subspace projections. Neurocomputing, 2010, 73, 1794-1800. | 3.5 | 0 |
| 44 | Fast eigenvalue calculations in a massively parallel plasma turbulence code. Parallel Computing, 2010, 36, 339-358. | 1.3 | 19 |
| 45 | Parallel implementation of the MAGPACK package for the analysis of high-nuclearity spin clusters. Computer Physics Communications, 2010, 181, 1929-1940. | 3.0 | 14 |
| 46 | A Parallel Implementation of the Jacobi-Davidson Eigensolver and Its Application in a Plasma Turbulence Code. Lecture Notes in Computer Science, 2010, , 101-112. | 1.0 | 3 |
| 47 | Simulating control rod and fuel assembly motion using moving meshes. Annals of Nuclear Energy, 2008, 35, 291-303. | 0.9 | 6 |
| 48 | Parallel Eigensolvers for a Discretized Radiative Transfer Problem. Lecture Notes in Computer Science, 2008, , 336-348. | 1.0 | 4 |
| 49 | A Parallel Implementation of the Trace Minimization Eigensolver. Lecture Notes in Computer Science, 2008, , 255-268. | 1.0 | 0 |
| 50 | Parallel Arnoldi eigensolvers with enhanced scalability via global communications rearrangement. Parallel Computing, 2007, 33, 521-540. | 1.3 | 45 |
| 51 | Recent additions to SLEPc, the Scalable Library for Eigenvalue Problem computations. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1141703-1141704. | 0.2 | 0 |
| 52 | A parallel Krylovâ€"Schur implementation for large Hermitian and nonâ€"Hermitian eigenproblems. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2020083-2020084. | 0.2 | 0 |
| 53 | Evaluation of Several Variants of Explicitly Restarted Lanczos Eigensolvers and Their Parallel Implementations. , 2006, , 403-416. | | 2 |
| 54 | A Survey of High-Quality Computational Libraries and Their Impact in Science and Engineering Applications. Lecture Notes in Computer Science, 2005, , 37-50. | 1.0 | 2 |

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|---|---------|----|-----------|
| 55 | SLEPc. ACM Transactions on Mathematical Software, 2005, 31, 351-362. | 1.6 | 747 |
| 56 | High-quality computational tools for linear-algebra problems in FEM electromagnetic simulation [EM Programmer's Notebook]. IEEE Antennas and Propagation Magazine, 2004, 46, 110-119. | 1.2 | 1 |
| 57 | SLEPc: Scalable Library for Eigenvalue Problem Computations. Lecture Notes in Computer Science, 2003, , 377-391. | 1.0 | 32 |
| 58 | A Parallel Rendering Algorithm Based on Hierarchical Radiosity. Lecture Notes in Computer Science, 2003, , 523-536. | 1.0 | 3 |
| 59 | PARALLEL SLICOT MODEL REDUCTION ROUTINES: THE CHOLESKY FACTOR OF GRAMMIANS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 327-332. | 0.4 | 2 |
| 60 | High performance virtual reality distributed electronic commerce: application for the furniture and ceramics industries. , 0, , . | | 1 |
| 61 | MICSc: a PETSc-Based Parallel Code for Large Eddy Simulation. , 0, , . | | 0 |