

# JosÃ© M FerrÃ¡ndiz

## List of Publications by Year in descending order

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88  
papers

1,040  
citations

430442

18  
h-index

500791

28  
g-index

99  
all docs

99  
docs citations

99  
times ranked

271  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | The Rotation of the Nonrigid Earth at the Second Order. II. The Poincaré Model: Nonsingular Complex Canonical Variables and Poisson Terms. <i>Astronomical Journal</i> , 2021, 161, 232. | 1.9 | 0         |
| 2  | Towards Understanding the Interconnection between Celestial Pole Motion and Earth's Magnetic Field Using Space Geodetic Techniques. <i>Sensors</i> , 2021, 21, 7555.                     | 2.1 | 2         |
| 3  | Forced nutations of a two-layer Earth in canonical formulation with dissipative Hori-like kernel. <i>Advances in Space Research</i> , 2020, 66, 2646-2653.                               | 1.2 | 2         |
| 4  | Report of the IAU/IAG Joint Working Group on Theory of Earth Rotation and Validation. <i>International Association of Geodesy Symposia</i> , 2020, , 99-106.                             | 0.2 | 3         |
| 5  | Drift of the Earth's Principal Axes of Inertia from GRACE and Satellite Laser Ranging Data. <i>Remote Sensing</i> , 2020, 12, 314.   | 1.8 | 1         |
| 6  | A new hybrid method to improve the ultra-short-term prediction of LOD. <i>Journal of Geodesy</i> , 2020, 94, 23.   | 1.6 | 24        |
| 7  | A First Assessment of the Corrections for the Consistency of the IAU2000 and IAU2006 Precession-Nutation Models. <i>International Association of Geodesy Symposia</i> , 2020, , 91-98.   | 0.2 | 0         |
| 8  | Nutation of the non-rigid Earth: Effect of the mass redistribution. <i>Astronomy and Astrophysics</i> , 2020, 643, A159.   | 2.1 | 1         |
| 9  | Precession of the non-rigid Earth: Effect of the mass redistribution. <i>Astronomy and Astrophysics</i> , 2019, 626, A58.  | 2.1 | 4         |
| 10 | Polar motion prediction using the combination of SSA and Copula-based analysis. <i>Earth, Planets and Space</i> , 2018, 70, 115.   | 0.9 | 34        |
| 11 | A new method to improve the prediction of the celestial pole offsets. <i>Scientific Reports</i> , 2018, 8, 13861.  | 1.6 | 11        |
| 12 | Cassini's motions of the Moon and Mercury and possible excitations of free librations. <i>Geodesy and Geodynamics</i> , 2018, 9, 474-484.  | 1.0 | 1         |
| 13 | Limitations of the IAU2000 nutation model accuracy due to the lack of Oppolzer terms of planetary origin. <i>Astronomy and Astrophysics</i> , 2018, 618, A69.                            | 2.1 | 2         |
| 14 | Application of first-order canonical perturbation method with dissipative Hori-like kernel. <i>International Journal of Non-Linear Mechanics</i> , 2017, 90, 11-20.                      | 1.4 | 5         |
| 15 | CONTRIBUTIONS OF THE ELASTICITY TO THE PRECESSION OF A TWO-LAYER EARTH MODEL. <i>Astronomical Journal</i> , 2017, 153, 79.   | 1.9 | 6         |
| 16 | On the consistency of the current conventional EOP series and the celestial and terrestrial reference frames. <i>Journal of Geodesy</i> , 2017, 91, 135-149.                             | 1.6 | 11        |
| 17 | An Improved Empirical Harmonic Model of the Celestial Intermediate Pole Offsets from a Global VLBI Solution. <i>Astronomical Journal</i> , 2017, 154, 166.                               | 1.9 | 12        |
| 18 | Dynamical adjustments in IAU 2000A nutation series arising from IAU 2006 precession. <i>Astronomy and Astrophysics</i> , 2017, 604, A92.   | 2.1 | 9         |

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|----|---|-----|-----------|
| 19 | Testing a new Free Core Nutation empirical model. <i>Journal of Geodynamics</i> , 2016, 94-95, 59-67.   | 0.7 | 20        |
| 20 | Consistency Problems in the Improvement of the IAU Precession–Nutation Theories: Effects of the Dynamical Ellipticity Differences. <i>Pure and Applied Geophysics</i> , 2016, 173, 861-870.   | 0.8 | 6         |
| 21 | HISTORICAL REFLECTIONS ON THE WORK OF COMMISSION 4. <i>Proceedings of the International Astronomical Union</i> , 2015, 11, 1-21.  | 0.0 | 3         |
| 22 | How Consistent are The Current Conventional Celestial and Terrestrial Reference Frames and The Conventional Earth Orientation Parameters?. <i>International Association of Geodesy Symposia</i> , 2015, , 183-189.                        | 0.2 | 3         |
| 23 | Earth’s Rotation: A Challenging Problem in Mathematics and Physics. <i>Pure and Applied Geophysics</i> , 2015, 172, 57-74.  | 0.8 | 7         |
| 24 | The New IAU/IAG Joint Working Group on Theory of Earth Rotation. <i>International Association of Geodesy Symposia</i> , 2015, , 533-538.  | 0.2 | 9         |
| 25 | On the decorrelation filtering of RL05 GRACE data for global applications. <i>Geophysical Journal International</i> , 2015, 200, 173-184.   | 1.0 | 11        |
| 26 | A note on the periodic orbits of a self excited rigid body. <i>Mechanics Research Communications</i> , 2014, 56, 50-52.   | 1.0 | 2         |
| 27 | - Mercury’s Magnetic Field in the MESSENGER Era. , 2014, , 238-277.   |     | 0         |
| 28 | A New Algorithm to Accelerate Harmonic Analysis of Time Series. <i>ISRN Applied Mathematics</i> , 2013, 2013, 1-8.  | 0.5 | 0         |
| 29 | Molecular cloning and localization of the luteinizing hormone $\beta$ subunit and glycoprotein hormone $\alpha$ subunit from Japanese anchovy <i>Engraulis japonicus</i> . <i>Journal of Fish Biology</i> , 2010, 77, 372-387.            | 0.7 | 9         |
| 30 | Accurate Numerical Integration of Perturbed Oscillatory Systems in Two Frequencies. <i>ACM Transactions on Mathematical Software</i> , 2009, 36, 1-34.  | 1.6 | 9         |
| 31 | Multistep numerical methods for the integration of oscillatory problems in several frequencies. <i>Advances in Engineering Software</i> , 2009, 40, 543-553.  | 1.8 | 7         |
| 32 | Numeric multistep variable methods for perturbed linear system integration. <i>Applied Mathematics and Computation</i> , 2007, 190, 63-79.  | 1.4 | 13        |
| 33 | An improved algorithm to compute circular functions of Poisson series. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2007, 99, 59-68.  | 0.5 | 2         |
| 34 | Report of the International Astronomical Union Division I Working Group on Precession and the Ecliptic. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2006, 94, 351-367.   | 0.5 | 57        |
| 35 | Controlling the error growth in long-term numerical integration of perturbed oscillations in one or several frequencies. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2004, 460, 561-567. | 1.0 | 50        |
| 36 | Precession of the Nonrigid Earth: Effect of the Fluid Outer Core. <i>Astronomical Journal</i> , 2004, 128, 1407-1411.   | 1.9 | 14        |

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|----|---|-----|-----------|
| 37 | Integrability of Hamiltonians with polynomial potentials. <i>Journal of Computational and Applied Mathematics</i> , 2003, 158, 213-224.                                     | 1.1 | 6         |
| 38 | A New Symbolic Processor for the Earth Rotation Theory. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2002, 82, 243-263.   | 0.5 | 13        |
| 39 | Indirect effect of the triaxiality in the Hamiltonian theory for the rigid Earth nutations. <i>Astronomy and Astrophysics</i> , 2002, 389, 1047-1054.                       | 2.1 | 16        |
| 40 | Canonical approach to the free nutations of a three-layer Earth model. <i>Journal of Geophysical Research</i> , 2001, 106, 11387-11397.                                     | 3.3 | 14        |
| 41 | Forced nutations of a two-layer Earth model. <i>Monthly Notices of the Royal Astronomical Society</i> , 2001, 322, 785-799.   | 1.6 | 23        |
| 42 | Hamiltonian theory for the non-rigid Earth: Semidiurnal terms. <i>Astronomy and Astrophysics</i> , 2001, 370, 330-341.  | 2.1 | 11        |
| 43 | Effects of dissipation and a liquid core on forced nutations in Hamiltonian theory. <i>Geophysical Journal International</i> , 2000, 142, 703-715.                          | 1.0 | 17        |
| 44 | Advances in the Unified Theory of the Rotation of the Nonrigid Earth. <i>International Astronomical Union Colloquium</i> , 2000, 180, 236-241.                              | 0.1 | 2         |
| 45 | Nature and Properties of the Chandler Motion and Mechanism of its Damping and Excitation. <i>International Astronomical Union Colloquium</i> , 2000, 178, 447-453.          | 0.1 | 1         |
| 46 | Tidal Variations of the Earth Rotation. <i>International Astronomical Union Colloquium</i> , 2000, 178, 565-569.  | 0.1 | 0         |
| 47 | Free Frequencies for a Three Layered Earth Model. <i>International Astronomical Union Colloquium</i> , 2000, 178, 481-485.  | 0.1 | 0         |
| 48 | ENCKE METHODS ADAPTED TO REGULARIZING VARIABLES. <i>International Journal of Modern Physics A</i> , 2000, 15, 3993-4010.  | 0.5 | 5         |
| 49 | Numerical integration of perturbed linear systems. <i>Applied Numerical Mathematics</i> , 1999, 31, 183-189.  | 1.2 | 5         |
| 50 | Accurate analytical nutation series. <i>Monthly Notices of the Royal Astronomical Society</i> , 1999, 306, L45-L49.   | 1.6 | 12        |
| 51 | Obtaining the free frequencies of the non-rigid Earth. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1998, 71, 95-108.   | 0.5 | 8         |
| 52 | The Non-integrability of the Truncated Two Fixed Centres Problem. <i>Journal of Differential Equations</i> , 1998, 143, 147-150.  | 1.1 | 1         |
| 53 | VSVO multistep formulae adapted to perturbed second-order differential equations. <i>Applied Mathematics Letters</i> , 1998, 11, 83-87.                                     | 1.5 | 16        |
| 54 | A General Procedure For the Adaptation of Multistep Algorithms to the Integration of Oscillatory Problems. <i>SIAM Journal on Numerical Analysis</i> , 1998, 35, 1684-1708. | 1.1 | 105       |

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|----|---|-----|-----------|
| 55 | Higher-order variable-step algorithms adapted to the accurate numerical integration of perturbed oscillators. Computers in Physics, 1998, 12, 467.  | 0.6 | 19        |
| 56 | Non-integrability of some Hamiltonian systems in polar coordinates. Journal of Physics A, 1997, 30, 5869-5876.  | 1.6 | 11        |
| 57 | Multistep Numerical Methods Based on the Scheifele G-Functions with Application to Satellite Dynamics. SIAM Journal on Numerical Analysis, 1997, 34, 359-375.                               | 1.1 | 40        |
| 58 | A Hamiltonian approach to dissipative phenomena between the Earth's mantle and core, and effects on free nutations. Geophysical Journal International, 1997, 130, 326-334.                  | 1.0 | 23        |
| 59 | About the application of angle-action variables to the rotation of deformable celestial bodies. Symposium - International Astronomical Union, 1996, 172, 243-244.                           | 0.1 | 0         |
| 60 | Canonical treatment of dissipative forces between Earth mantle and core. Symposium - International Astronomical Union, 1996, 172, 233-238.  | 0.1 | 3         |
| 61 | Non integrability of the truncated zonal satellite Hamiltonian at any order. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 221, 153-157.                       | 0.9 | 7         |
| 62 | New numerical method improving the integration of time in KS regularization. Journal of Guidance, Control, and Dynamics, 1996, 19, 742-744.   | 1.6 | 4         |
| 63 | Behaviour of the SMF method for the numerical integration of satellite orbits. Celestial Mechanics and Dynamical Astronomy, 1995, 63, 29-40.  | 0.5 | 19        |
| 64 | On the effect of the mantle elasticity on the earth's rotation. Celestial Mechanics and Dynamical Astronomy, 1995, 61, 117-180.   | 0.5 | 36        |
| 65 | Non-existence of rational integrals in the J22-problem. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 207, 180-184.  | 0.9 | 10        |
| 66 | A Note on the Canonical Character of the Stiefel-Scheifele Time Element. NATO ASI Series Series B: Physics, 1995, , 545-550.  | 0.2 | 1         |
| 67 | Numerical tracking of small deviations from analytically known periodic orbits. Computers in Physics, 1994, 8, 455.   | 0.6 | 11        |
| 68 | Extended canonical transformations with redundant variables: Hamiltonian and Lagrangean formulations and degeneration. Zeitschrift Fur Angewandte Mathematik Und Physik, 1994, 45, 458-477. | 0.7 | 1         |
| 69 | A rigorous Hamiltonian approach to the rotation of elastic bodies. Celestial Mechanics and Dynamical Astronomy, 1994, 58, 277-295.  | 0.5 | 7         |
| 70 | On the roto-translatory motion of a satellite of an oblate primary. Celestial Mechanics and Dynamical Astronomy, 1993, 57, 189-202.   | 0.5 | 7         |
| 71 | On the tidal variation of the geopotential. Celestial Mechanics and Dynamical Astronomy, 1993, 57, 279-292.   | 0.5 | 10        |
| 72 | A family of multistep methods to integrate orbits on spheres. Numerische Mathematik, 1993, 65, 285-300.   | 0.9 | 0         |

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|----|---|-----|-----------|
| 73 | New Intermediaries for the Main Problem in Satellite Theory. International Astronomical Union Colloquium, 1993, 132, 341-352.                                   | 0.1 | 1         |
| 74 | Long-Term Predictions for Highly Eccentric Orbits. International Astronomical Union Colloquium, 1993, 132, 353-363.   | 0.1 | 0         |
| 75 | On the Tidal Variation of the Geopotential. , 1993, , 279-292.  |     | 0         |
| 76 | Increased accuracy of computations in the main satellite problem through linearization methods. Celestial Mechanics and Dynamical Astronomy, 1992, 53, 347-363. | 0.5 | 22        |
| 77 | A Hamiltonian theory for an elastic earth: Elastic energy of deformation. Celestial Mechanics and Dynamical Astronomy, 1991, 51, 17-34.                         | 0.5 | 24        |
| 78 | A Hamiltonian theory for an elastic earth: First order analytical integration. Celestial Mechanics and Dynamical Astronomy, 1991, 51, 35-65.                    | 0.5 | 31        |
| 79 | A Hamiltonian theory for an elastic earth: Secular rotational acceleration. Celestial Mechanics and Dynamical Astronomy, 1991, 52, 381-396.                     | 0.5 | 13        |
| 80 | Exact linearization of non-planar intermediary orbits in the satellite theory. Celestial Mechanics and Dynamical Astronomy, 1991, 52, 1-12.                     | 0.5 | 3         |
| 81 | Long-Time Predictions of Satellite Orbits by Numerical Integration. NATO ASI Series Series B: Physics, 1991, , 387-394.   | 0.2 | 3         |
| 82 | Improved Bettis Methods for Long-Term Prediction. NATO ASI Series Series B: Physics, 1991, , 515-522.   | 0.2 | 4         |
| 83 | A Hamiltonian theory for an elastic earth: Canonical variables and kinetic energy. Celestial Mechanics and Dynamical Astronomy, 1990, 49, 303-326.              | 0.5 | 30        |
| 84 | Elimination of the nodes when the satellite is a non spherical rigid body. Celestial Mechanics and Dynamical Astronomy, 1989, 46, 307-320.                      | 0.5 | 18        |
| 85 | Generalized elliptic anomalies. Celestial Mechanics, 1987, 40, 315-328.   | 0.1 | 19        |
| 86 | A general canonical transformation increasing the number of variables with application to the two-body problem. Celestial Mechanics, 1987, 41, 343-357.         | 0.1 | 46        |
| 87 | Linearization in special cases of perturbed Keplerian motions. Celestial Mechanics, 1986, 39, 23-31.  | 0.1 | 10        |
| 88 | JASON-1 calibration campaign at the Ibiza island area. , 0, , .   |     | 1         |