

# Mathieu Dumberry

## List of Publications by Year in descending order

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49  
papers

1,277  
citations

361413

20  
h-index

361022

35  
g-index

56  
all docs

56  
docs citations

56  
times ranked

757  
citing authors

#	ARTICLE	IF	CITATIONS
1	Gravity Variations and Ground Deformations Resulting from Core Dynamics. <i>Surveys in Geophysics</i> , 2022, 43, 5-39.	4.6	6
2	Core Eigenmodes and their Impact on the Earth's Rotation. <i>Surveys in Geophysics</i> , 2022, 43, 107-148.	4.6	9
3	Deviation of Mercury's Spin Axis From an Exact Cassini State Induced by Dissipation. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	1
4	Challenges on Mercury's Interior Structure Posed by the New Measurements of its Obliquity and Tides. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL089895.	4.0	24
5	The Influence of a Fluid Core and a Solid Inner Core on the Cassini State of Mercury. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006621.	3.6	5
6	Viscous Dissipation in the Fluid Core of the Moon. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006966.	3.6	2
7	The limited contribution from outer core dynamics to global deformations at the Earth's surface. <i>Geophysical Journal International</i> , 2020, 224, 216-229.	2.4	9
8	Viscoelastic Relaxation within the Moon and the Phase Lead of Its Cassini State. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006386.	3.6	11
9	A Past Lunar Dynamo Thermally Driven by the Precession of Its Inner Core. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006396.	3.6	14
10	Weak magnetic field changes over the Pacific due to high conductance in lowermost mantle. <i>Nature Geoscience</i> , 2020, 13, 516-520.	12.9	6
11	Convectively driven decadal zonal accelerations in Earth's fluid core. <i>Geophysical Journal International</i> , 2018, 213, 434-446.	2.4	7
12	The Cassini State of the Moon's Inner Core. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2868-2892.	3.6	11
13	The forced precession of the Moon's inner core. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1264-1292.	3.6	18
14	Reconciling past changes in Earth's rotation with 20th century global sea-level rise: Resolving Munk's enigma. <i>Science Advances</i> , 2015, 1, e1500679.	10.3	45
15	Mercury's inner core size and core-crystallization regime. <i>Icarus</i> , 2015, 248, 254-268.	2.5	72
16	The strength of gravitational core-mantle coupling. <i>Geophysical Research Letters</i> , 2014, 41, 3786-3792.	4.0	38
17	Influence of an inner core on the long-period forced librations of Mercury. <i>Icarus</i> , 2013, 226, 41-51.	2.5	18
18	The role of Mercury's core density structure on its longitudinal librations. <i>Icarus</i> , 2013, 225, 62-74.	2.5	21

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19	Internal forcing of Mercury's long period free librations. <i>Icarus</i> , 2013, 223, 40-47.	2.5	11
20	The role of the magnetic field morphology on the electromagnetic coupling for nutations. <i>Geophysical Journal International</i> , 2013, 195, 200-210.	2.4	9
21	A global model of electromagnetic coupling for nutations. <i>Geophysical Journal International</i> , 2012, 191, 530-544.	2.4	8
22	The free librations of Mercury and the size of its inner core. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	17
23	Viscosity of the Earth's inner core: Constraints from nutation observations. <i>Earth and Planetary Science Letters</i> , 2011, 308, 343-349.	4.4	49
24	Steady and fluctuating inner core rotation in numerical geodynamo models. <i>Geophysical Journal International</i> , 2011, 184, 162-170.	2.4	36
25	A new twist on inner-core spin. <i>Nature Geoscience</i> , 2011, 4, 216-217.	12.9	0
26	The influence of Mercury's inner core on its physical libration. <i>Icarus</i> , 2011, 214, 265-274.	2.5	17
27	Short Timescale Core Dynamics: Theory and Observations. <i>Space Science Reviews</i> , 2010, 155, 177-218.	8.1	98
28	Gravity variations induced by core flows. <i>Geophysical Journal International</i> , 2010, 180, 635-650.	2.4	24
29	Inner core-mantle gravitational locking and the super-rotation of the inner core. <i>Geophysical Journal International</i> , 2010, , .	2.4	8
30	Constraints on the coupling at the core-mantle and inner core boundaries inferred from nutation observations. <i>Geophysical Journal International</i> , 2010, 182, 1279-1294.	2.4	47
31	Gravitationally driven inner core differential rotation. <i>Earth and Planetary Science Letters</i> , 2010, 297, 387-394.	4.4	13
32	Short Timescale Core Dynamics: Theory and Observations. <i>Space Sciences Series of ISSI</i> , 2010, , 177-218.	0.0	2
33	Influence of elastic deformations on the inner core wobble. <i>Geophysical Journal International</i> , 2009, 178, 57-64.	2.4	19
34	Decadal variations in gravity caused by a tilt of the inner core. <i>Geophysical Journal International</i> , 2008, 172, 921-933.	2.4	11
35	Gravitational torque on the inner core and decadal polar motion. <i>Geophysical Journal International</i> , 2008, 172, 903-920.	2.4	23
36	Constraints on core-mantle electromagnetic coupling from torsional oscillation normal modes. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	27

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37	Course 7 Taylor's constraint and torsional oscillations. Les Houches Summer School Proceedings, 2008, , 383-401.	0.2	1
38	Eastward and westward drift of the Earth's magnetic field for the last three millennia. Earth and Planetary Science Letters, 2007, 254, 146-157.	4.4	84
39	Geodynamic constraints on the steady and time-dependent inner core axial rotation. Geophysical Journal International, 2007, 170, 886-895.	2.4	21
40	Azimuthal flows in the Earth's core and changes in length of day at millennial timescales. Geophysical Journal International, 2006, 165, 32-46.	2.4	55
41	Variations in the Earth's gravity field caused by torsional oscillations in the core. Geophysical Journal International, 2004, 159, 417-434.	2.4	31
42	Torque balance, Taylor's constraint and torsional oscillations in a numerical model of the geodynamo. Physics of the Earth and Planetary Interiors, 2003, 140, 29-51.	1.9	39
43	Inner core tilt and polar motion. Geophysical Journal International, 2002, 151, 377-392.	2.4	42
44	The origin of geomagnetic jerks. Nature, 2002, 420, 65-68.	27.8	186
45	ARANEA, a program for generating unstructured triangular meshes with a JAVA Graphics User Interface. Computer Physics Communications, 2001, 139, 172-185.	7.5	3
46	On the validity of the geostrophic approximation for calculating the changes in the angular momentum of the core. Physics of the Earth and Planetary Interiors, 1999, 112, 81-99.	1.9	8
47	CARRE: a quasi-orthogonal mesh generator for 2D edge plasma modelling. Computer Physics Communications, 1996, 96, 232-246.	7.5	57
48	Up-down symmetry in double null divertor experiments and magnetic field topology. Nuclear Fusion, 1995, 35, 297-304.	3.5	11
49	Interannual variations of degree 2 from geodetic observations and surface processes. Geophysical Journal International, 0, , .	2.4	3