Aurelien D G Hees

List of Publications by Citations

53 papers	1,421 citations	23 h-index	37 g-index
59 ext. papers	1,891 ext. citations	5.8 avg, IF	4.71 L-index

#	Paper	IF	Citations
53	Relativistic redshift of the star S0-2 orbiting the Galactic Center supermassive black hole. *Science*, **2019**, 365, 664-668	33.3	131
52	Testing General Relativity with Stellar Orbits around the Supermassive Black Hole in Our Galactic Center. *Physical Review Letters*, **2017**, 118, 211101	7.4	95
51	Searching for an Oscillating Massive Scalar Field as a Dark Matter Candidate Using Atomic Hyperfine Frequency Comparisons. *Physical Review Letters*, **2016**, 117, 061301	7.4	90
50	Constraints on modified Newtonian dynamics theories from radio tracking data of the Cassini spacecraft. *Physical Review D*, **2014**, 89,	4.9	84
49	AEDGE: Atomic Experiment for Dark Matter and Gravity Exploration in Space. *EPJ Quantum Technology*, **2020**, 7,	6.9	76
48	Gravitational Redshift Test Using Eccentric Galileo Satellites. *Physical Review Letters*, **2018**, 121, 231101	7.4	65
47	Combined Solar system and rotation curve constraints on MOND. *Monthly Notices of the Royal Astronomical Society*, **2016**, 455, 449-461	4.3	55
46	Tests of Lorentz Symmetry in the Gravitational Sector. *Universe*, **2016**, 2, 30	2.5	53
45	Test of the gravitational redshift with stable clocks in eccentric orbits: application to Galileo satellites 5 and 6. *Classical and Quantum Gravity*, **2015**, 32, 232003	3.3	50
44	Breaking of the equivalence principle in the electromagnetic sector and its cosmological signatures. *Physical Review D*, **2014**, 90,	4.9	48
43	Testing Lorentz symmetry with planetary orbital dynamics. *Physical Review D*, **2015**, 92,	4.9	42
42	Violation of the equivalence principle from light scalar dark matter. *Physical Review D*, **2018**, 98,	4.9	40
41	Fab Four: When John and George Play Gravitation and Cosmology. *Advances in Astronomy*, **2012**, 2012, 1-14	0.9	37
40	Investigating the Binarity of S0-2: Implications for Its Origins and Robustness as a Probe of the Laws of Gravity around a Supermassive Black Hole. *Astrophysical Journal*, **2018**, 854, 12	4.7	36
39	Testing Lorentz Symmetry with Lunar Laser Ranging. *Physical Review Letters*, **2016**, 117, 241301	7.4	36
38	Radioscience simulations in general relativity and in alternative theories of gravity. *Classical and Quantum Gravity*, **2012**, 29, 235027	3.3	35
37	Late-time cosmology of a scalar-tensor theory with a universal multiplicative coupling between the scalar field and the matter Lagrangian. *Physical Review D*, **2014**, 90,	4.9	34

36	Lorentz Symmetry Violations from Matter-Gravity Couplings with Lunar Laser Ranging. *Physical Review Letters*, **2017**, 119, 201102	7.4	32
35	Combined cosmological and solar system constraints on chameleon mechanism. *Physical Review D*, **2012**, 85,	4.9	31
34	Search for transient variations of the fine structure constant and dark matter using fiber-linked optical atomic clocks. *New Journal of Physics*, **2020**, 22, 093010	2.9	30
33	Relativistic formulation of coordinate light time, Doppler, and astrometric observables up to the second post-Minkowskian order. *Physical Review D*, **2014**, 89,	4.9	25
32	A population of dust-enshrouded objects orbiting the Galactic black hole. *Nature*, **2020**, 577, 337-340	50.4	24
31	Intrinsic Solar System decoupling of a scalar-tensor theory with a universal coupling between the scalar field and the matter Lagrangian. *Physical Review D*, **2013**, 88,	4.9	23
30	Lorentz symmetry and very long baseline interferometry. *Physical Review D*, **2016**, 94,	4.9	23
29	The Post-periapsis Evolution of Galactic Center Source G1: The Second Case of a Resolved Tidal Interaction with a Supermassive Black Hole. *Astrophysical Journal*, **2017**, 847, 80	4.7	22
28	Confusing Binaries: The Role of Stellar Binaries in Biasing Disk Properties in the Galactic Center. *Astrophysical Journal Letters*, **2018**, 853, L24	7.9	21
27	Light propagation in the field of a moving axisymmetric body: Theory and applications to the Juno mission. *Physical Review D*, **2014**, 90,	4.9	20
26	A Hidden Friend for the Galactic Center Black Hole, Sgr A*. *Astrophysical Journal Letters*, **2020**, 888, L8	7.9	19
25	The Galactic Center: Improved Relative Astrometry for Velocities, Accelerations, and Orbits near the Supermassive Black Hole. *Astrophysical Journal*, **2019**, 873, 9	4.7	14
24	Search for a Variation of the Fine Structure Constant around the Supermassive Black Hole in Our Galactic Center. *Physical Review Letters*, **2020**, 124, 081101	7.4	13
23	Clocks in Space for Tests of Fundamental Physics. *Space Science Reviews*, **2017**, 212, 1385-1421	7.5	12
22	The Galactic Center: An Improved Astrometric Reference Frame for Stellar Orbits around the Supermassive Black Hole. *Astrophysical Journal*, **2019**, 873, 65	4.7	12
21	Improving Orbit Estimates for Incomplete Orbits with a New Approach to Priors: with Applications from Black Holes to Planets. *Astronomical Journal*, **2019**, 158, 4	4.9	11
20	Test of the Equivalence Principle in the Dark sector on galactic scales. *Journal of Cosmology and Astroparticle Physics*, **2016**, 2016, 032-032	6.4	10
19	Emergent gravity in galaxies and in the Solar System. *Physical Review D*, **2017**, 95,	4.9	9

18	Dilatons with intrinsic decouplings. *Physical Review D*, **2016**, 94,	4.9	9
17	Observables in theories with a varying fine structure constant. *General Relativity and Gravitation*, **2015**, 47, 1	2.3	7
16	A new test of gravitational redshift using Galileo satellites: The GREAT experiment. *Comptes Rendus Physique*, **2019**, 20, 176-182	1.4	6
15	Consistency of the Infrared Variability of SGR A* over 22 yr. *Astrophysical Journal Letters*, **2019**, 882, L28	7.9	6
14	Searching for Dark Matter with an Optical Cavity and an Unequal-Delay Interferometer. *Physical Review Letters*, **2021**, 126, 051301	7.4	6
13	New Test of Lorentz Invariance Using the MICROSCOPE Space Mission. *Physical Review Letters*, **2019**, 123, 231102	7.4	5
12	An Adaptive Scheduling Tool to Optimize Measurements to Reach a Scientific Objective: Methodology and Application to Measurements of Stellar Orbits in the Galactic Center. *Astrophysical Journal*, **2019**, 880, 87	4.7	4
11	Vibrating systems in Schwarzschild spacetime: toward new experiments in gravitation?. *Classical and Quantum Gravity*, **2009**, 26, 185006	3.3	4
10	CAN THE CHAMELEON MECHANISM EXPLAIN COSMIC ACCELERATION WHILE SATISFYING SOLAR SYSTEM CONSTRAINTS? **2015**,		2
9	Constraining velocity-dependent Lorentz and CPT violations using lunar laser ranging. *Physical Review D*, **2021**, 103,	4.9	2
8	Exploring the foundations of the physical universe with space tests of the equivalence principle. *Experimental Astronomy*,1	1.3	2
7	Use of Geodesy and Geophysics Measurements to Probe the Gravitational Interaction. *Fundamental Theories of Physics*, **2019**, 317-358	0.8	1
6	Local tests of gravitation with Gaia observations of Solar System Objects. *Proceedings of the International Astronomical Union*, **2017**, 12, 63-66	0.1	1
5	A relativistic motion integrator: numerical accuracy and illustration with BepiColombo and Mars-NEXT. *Proceedings of the International Astronomical Union*, **2009**, 5, 144-146	0.1	1
4	The motion of vibrating systems in Schwarzchild spacetime. *Proceedings of the International Astronomical Union*, **2009**, 5, 147-151	0.1	1
3	The local dark sector. *Experimental Astronomy*, **2021**, 51, 1737	1.3	0
2	Clocks in Space for Tests of Fundamental Physics. *Space Sciences Series of ISSI*, **2017**, 7-43	0.1	
1	Statistical Challenges in fitting stellar orbits around the super-massive black hole at the Galactic center. *Proceedings of the International Astronomical Union*, **2016**, 11, 239-240	0.1	