Roberto Trotta

List of Publications by Year
in descending order

97	6,423	76326 40	64796 79
papers	citations	h-index	g-index

97	97	97	6648
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Bayes in the sky: Bayesian inference and model selection in cosmology. Contemporary Physics, 2008, 49, 71-104.	1.8	777
2	Cosmology and Fundamental Physics with the Euclid Satellite. Living Reviews in Relativity, 2013, 16, 6.	26.7	683
3	Cosmology and fundamental physics with the Euclid satellite. Living Reviews in Relativity, 2018, 21, 2.	26.7	602
4	DARWIN: towards the ultimate dark matter detector. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 017-017.	5.4	288
5	CONSTRAINTS ON COSMIC-RAY PROPAGATION MODELS FROM A GLOBAL BAYESIAN ANALYSIS. Astrophysical Journal, 2011, 729, 106.	4.5	268
6	Applications of Bayesian model selection to cosmological parameters. Monthly Notices of the Royal Astronomical Society, 2007, 378, 72-82.	4.4	239
7	A Markov chain Monte Carlo analysis of the CMSSM. Journal of High Energy Physics, 2006, 2006, 002-002.	4.7	167
8	The impact of priors and observables on parameter inferences in the constrained MSSM. Journal of High Energy Physics, 2008, 2008, 024-024.	4.7	161
9	The best inflationary models after Planck. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 039-039.	5.4	141
10	Implications for the Constrained MSSM from a new prediction forbâ†'sÎ³. Journal of High Energy Physics, 2007, 2007, 075-075.	4.7	121
11	BAYESIAN ANALYSIS OF COSMIC RAY PROPAGATION: EVIDENCE AGAINST HOMOGENEOUS DIFFUSION. Astrophysical Journal, 2016, 824, 16.	4.5	121
12	Indirect Dark Matter detection from Dwarf satellites: joint expectations from astrophysics and supersymmetry. Journal of Cosmology and Astroparticle Physics, 2009, 2009, 014-014.	5.4	113
13	Measuring the effective complexity of cosmological models. Physical Review D, 2006, 74, .	4.7	109
14	Global fits of the cMSSM and NUHM including the LHC Higgs discovery and new XENON100 constraints. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 013-013.	5.4	89
15	Bayesian selection of sign Î¼ within mSUGRA in global fits including WMAP5 results. Journal of High Energy Physics, 2008, 2008, 064-064.	4.7	85
16	The impact of an extra background of relativistic particles on the cosmological parameters derived from the cosmic microwave background. Monthly Notices of the Royal Astronomical Society, 2002, 334, 760-768.	4.4	84
17	Complementarity of dark matter direct detection targets. Physical Review D, 2011, 83, .	4.7	82
18	Reconstructing WIMP properties in direct detection experiments including galactic dark matter distribution uncertainties. Journal of Cosmology and Astroparticle Physics, 2009, 2009, 019-019.	5.4	80

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19	Improved constraints on cosmological parameters from Type Ia supernova data. Monthly Notices of the Royal Astronomical Society, 2011, 418, 2308-2329.	4.4	75
20	A global analysis of dark matter signals from 27 dwarf spheroidal galaxies using 11 years of Fermi-LAT observations. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 012-012.	5.4	74
21	Hunting down the best model of inflation with Bayesian evidence. Physical Review D, 2011, 83, .	4.7	69
22	Updated global fits of the cMSSM including the latest LHC SUSY and Higgs searches and XENON100 data. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 030-030.	5.4	68
23	Indication for Primordial Anisotropies in the Neutrino Background from the Wilkinson Microwave Anisotropy Probe and the Sloan Digital Sky Survey. Physical Review Letters, 2005, 95, 011305.	7.8	66
24	Measuring Î± in the early Universe: cosmic microwave background polarization, re-ionization and the Fisher matrix analysis. Monthly Notices of the Royal Astronomical Society, 2004, 352, 20-38.	4.4	63
25	Constraints on a mixed inflaton and curvaton scenario for the generation of the curvature perturbation. Physical Review D, 2004, 70, .	4.7	62
26	Challenges of profile likelihood evaluation in multi-dimensional SUSY scans. Journal of High Energy Physics, 2011, 2011, 1.	4.7	62
27	WMAP constraints on varying Î± and the promise of reionization. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 585, 29-34.	4.1	61
28	Cosmic Microwave Background Anisotropies with Mixed Isocurvature Perturbations. Physical Review Letters, 2001, 87, 231301.	7.8	58
29	BAHAMAS: NEW ANALYSIS OF TYPE Ia SUPERNOVAE REVEALS INCONSISTENCIES WITH STANDARD COSMOLOGY. Astrophysical Journal, 2016, 827, 1.	4.5	57
30	Bayesian calibrated significance levels applied to the spectral tilt and hemispherical asymmetry. Monthly Notices of the Royal Astronomical Society, 0, 382, 1859-1863.	4.4	55
31	Constraining the helium abundance with CMB data. Physical Review D, 2004, 69, .	4.7	53
32	Global fits of the cMSSM including the first LHC and XENON100 data. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 015-015.	5.4	53
33	Identification of dark matter particles with LHC and direct detection data. Physical Review D, 2010, 82, .	4.7	50
34	Retrieval Analysis of the Emission Spectrum of WASP-12b: Sensitivity of Outcomes to Prior Assumptions and Implications for Formation History. Astrophysical Journal Letters, 2017, 847, L3.	8.3	49
35	The isocurvature fraction after WMAP 3-yr data. Monthly Notices of the Royal Astronomical Society: Letters, 2007, 375, L26-L30.	3.3	48
36	How flat can you get? A model comparison perspective on the curvature of the Universe. Monthly Notices of the Royal Astronomical Society, 2009, 397, 431-444.	4.4	48

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37	Global analysis of the pMSSM in light of the Fermi GeV excess: prospects for the LHC Run-II and astroparticle experiments. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 037-037.	5.4	48
38	Forecasting the Bayes factor of a future observation. Monthly Notices of the Royal Astronomical Society, 2007, 378, 819-824.	4.4	47
39	Profile likelihood maps of a 15-dimensional MSSM. Journal of High Energy Physics, 2014, 2014, 1.	4.7	44
40	Measuringî±in the early universe: CMB temperature, large-scale structure, and Fisher matrix analysis. Physical Review D, 2002, 66, .	4.7	43
41	On the detectability of the CMSSM light Higgs boson at the Tevatron. Journal of High Energy Physics, 2007, 2007, 084-084.	4.7	41
42	Compatibility of Planck and BICEP2 results in light of inflation. Physical Review D, 2014, 90, .	4.7	41
43	Prospects for direct dark matter detection in the constrained MSSM. New Astronomy Reviews, 2007, 51, 316-320.	12.8	40
44	Fundamental statistical limitations of future dark matter direct detection experiments. Physical Review D, 2012, 86, .	4.7	38
45	Sensitivity of the DARWIN observatory to the neutrinoless double beta decay of ^{136}Xe. European Physical Journal C, 2020, 80, 1.	3.9	38
46	Monolithic or hierarchical star formation? A new statistical analysis. Monthly Notices of the Royal Astronomical Society, 2008, 384, 1414-1426.	4.4	35
47	Bayesian reconstruction of the Milky Way dark matter distribution. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 046-046.	5.4	35
48	A robust estimate of the Milky Way mass from rotation curve data. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 033-033.	5.4	35
49	Taming astrophysical bias in direct dark matter searches. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 041-041.	5.4	34
50	On prospects for dark matter indirect detection in the Constrained MSSM. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 671, 10-14.	4.1	33
51	Robustness to systematics for future dark energy probes. Monthly Notices of the Royal Astronomical Society, 2011, 415, 143-152.	4.4	31
52	Applications of Bayesian model averaging to the curvature and size of the Universe. Monthly Notices of the Royal Astronomical Society: Letters, 2011, 413, L91-L95.	3.3	31
53	A coverage study of the CMSSM based on ATLAS sensitivity using fast neural networks techniques. Journal of High Energy Physics, 2011, 2011, 1.	4.7	31
54	Reconstructing the history of dark energy using maximum entropy. Monthly Notices of the Royal Astronomical Society, 0, 380, 865-876.	4.4	28

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55	Structure formation models weaken limits on WIMP dark matter from dwarf spheroidal galaxies. Physical Review D, 2020, 102, .	4.7	28
56	Global fits of the nonuniversal Higgs model. Physical Review D, 2011, 83, .	4.7	26
57	Solar neutrino detection sensitivity in DARWIN via electron scattering. European Physical Journal C, 2020, 80, 1.	3.9	26
58	New constraints on varying Î±. New Astronomy Reviews, 2003, 47, 863-869.	12.8	25
59	Cosmological constant and general isocurvature initial conditions. Physical Review D, 2003, 67, .	4.7	25
60	STACCATO: a novel solution to supernova photometric classification with biased training sets. Monthly Notices of the Royal Astronomical Society, 2018, 473, 3969-3986.	4.4	25
61	Prospects for dark matter detection with IceCube in the context of the CMSSM. Journal of Cosmology and Astroparticle Physics, 2009, 2009, 034-034.	5.4	24
62	Effective field theory of dark matter: a global analysis. Journal of High Energy Physics, 2016, 2016, 1.	4.7	24
63	Why Anthropic Reasoning Cannot PredictÎ›. Physical Review Letters, 2006, 97, 201301.	7.8	22
64	Efficient reconstruction of constrained MSSM parameters from LHC data: A case study. Physical Review D, 2010, 82, .	4.7	22
65	Complementarity of indirect and accelerator dark matter searches. Physical Review D, 2012, 85, .	4.7	21
66	Global fits of the minimal universal extra dimensions scenario. Physical Review D, 2011, 83, .	4.7	20
67	Should we doubt the cosmological constant?. Monthly Notices of the Royal Astronomical Society, 2011, 410, 2488-2496.	4.4	20
68	Dark matter interpretations of ATLAS searches for the electroweak production of supersymmetric particles in s = 8 $$ sqrt{s}=8 $$ TeV proton-proton collisions. Journal of High Energy Physics, 2016, 2016, 1.	4.7	16
69	Surveying the dark side. Astronomy and Geophysics, 2006, 47, 4.20-4.27.	0.2	14
70	Dark Matter searches: the nightmare scenario. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 004-004.	5.4	14
71	Evidence for dark matter modulation in CoGeNT?. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 008-008.	5.4	14
72	Flat tree-level inflationary potentials in the light of cosmic microwave background and large scale structure data. Journal of Cosmology and Astroparticle Physics, 2008, 2008, 018.	5.4	13

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73	New constraints on anisotropic expansion from supernovae Type Ia. Monthly Notices of the Royal Astronomical Society, 2022, 514, 139-163.	4.4	12
74	Communicating cosmology with multisensory metaphorical experiences. Journal of Science Communication, 2020, 19, N01.	0.8	11
75	Designing decisive detections. Monthly Notices of the Royal Astronomical Society, 2011, 414, 2337-2344.	4.4	10
76	Dark matter substructure cannot explain properties of the Fermi Galactic Centre excess. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 060-060.	5.4	10
77	Simple and statistically sound recommendations for analysing physical theories. Reports on Progress in Physics, 2022, 85, 052201.	20.1	9
78	Standardizing Type Ia supernovae optical brightness using near-infrared rebrightening time. Monthly Notices of the Royal Astronomical Society, 2016, 463, 4311-4316.	4.4	8
79	The cosmological constant and the paradigm of adiabaticity. New Astronomy Reviews, 2003, 47, 769-774.	12.8	6
80	Projected distances to host galaxy reduce SNIa dispersion. Monthly Notices of the Royal Astronomical Society, 2018, 481, 2766-2777.	4.4	6
81	Direct dark matter detection around the corner? Prospects in the Constrained MSSM. Journal of Physics: Conference Series, 2007, 60, 259-263.	0.4	5
82	Quantifying the tension between the Higgs mass and(gâˆ’2)Î¼in the constrained MSSM. Physical Review D, 2011, 84, .	4.7	4
83	Life, the universe, and everything. Significance, 2014, 11, 48-75.	0.4	3
84	Whatâ€™s the trouble with anthropic reasoning?. AIP Conference Proceedings, 2006, , .	0.4	2
85	The virtues of frugality â€" why cosmological observers should release their data slowly. Monthly Notices of the Royal Astronomical Society: Letters, 2010, 401, L15-L18.	3.3	2
86	Bayesian experimental design and model selection forecasting. , 0, , 99-125.		1
87	GPU-based optical simulation of the DARWIN detector. Journal of Instrumentation, 2022, 17, P07018.	1.2	1
88	Publisherâ€™s Note: Global fits of the nonuniversal Higgs model [Phys. Rev. D83, 015014 (2011)]. Physical Review D, 2011, 83, .	4.7	0
89	Special Issue on Astrostatistics. Statistical Analysis and Data Mining, 2013, 6, 1-2.	2.8	0
90	The Efficiency of Next-Generation Gibbs-Type Samplers: An Illustration Using a Hierarchical Model in Cosmology. ICSA Book Series in Statistics, 2016, , 167-184.	0.2	0

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91	TESTING THE PARADIGM OF ADIABATICITY. , 2006, , .		0
92	COSMOLOGICAL BAYESIAN MODEL SELECTION. , 2006, , .		0
93	PROSPECTS FOR DIRECT DARK MATTER SEARCHES IN THE CONSTRAINED MSSM. , 2007, , .		0
94	Recent Advances in Cosmological Bayesian Model Comparison. , 2012, , 3-15.		0
95	Cosmological Bayesian Model Selection: Recent Advances and Open Challenges. Lecture Notes in Statistics, 2012, , 127-140.	0.2	0
96	Recent Advances in Bayesian Inference in Cosmology and Astroparticle Physics Thanks to the MultiNest Algorithm. Springer Series in Astrostatistics, 2013, , 107-119.	0.6	0
97	Improved Cosmological Constraints from a Bayesian Hierarchical Model of Supernova Type Ia Data. , 2013, , 203-235.		0