

Roberto Trotta

List of Publications by Year in descending order

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97
papers

6,423
citations

87401

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73587

79
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97
all docs

97
docs citations

97
times ranked

7021
citing authors

#	ARTICLE	IF	CITATIONS
1	Simple and statistically sound recommendations for analysing physical theories. Reports on Progress in Physics, 2022, 85, 052201.	8.1	9
2	New constraints on anisotropic expansion from supernovae Type Ia. Monthly Notices of the Royal Astronomical Society, 2022, 514, 139-163.	1.6	12
3	GPU-based optical simulation of the DARWIN detector. Journal of Instrumentation, 2022, 17, P07018.	0.5	1
4	Solar neutrino detection sensitivity in DARWIN via electron scattering. European Physical Journal C, 2020, 80, 1.	1.4	26
5	Structure formation models weaken limits on WIMP dark matter from dwarf spheroidal galaxies. Physical Review D, 2020, 102, .	1.6	28
6	A robust estimate of the Milky Way mass from rotation curve data. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 033-033.	1.9	35
7	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.	1.9	74
8	Sensitivity of the DARWIN observatory to the neutrinoless double beta decay of ^{136}Xe . European Physical Journal C, 2020, 80, 1.	1.4	38
9	Communicating cosmology with multisensory metaphorical experiences. Journal of Science Communication, 2020, 19, N01.	0.4	11
10	Bayesian reconstruction of the Milky Way dark matter distribution. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 046-046.	1.9	35
11	Cosmology and fundamental physics with the Euclid satellite. Living Reviews in Relativity, 2018, 21, 2.	8.2	602
12	Projected distances to host galaxy reduce SNIa dispersion. Monthly Notices of the Royal Astronomical Society, 2018, 481, 2766-2777.	1.6	6
13	STACCATO: a novel solution to supernova photometric classification with biased training sets. Monthly Notices of the Royal Astronomical Society, 2018, 473, 3969-3986.	1.6	25
14	Dark matter substructure cannot explain properties of the Fermi Galactic Centre excess. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 060-060.	1.9	10
15	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.	3.0	49
16	Effective field theory of dark matter: a global analysis. Journal of High Energy Physics, 2016, 2016, 1.	1.6	24
17	Standardizing Type Ia supernovae optical brightness using near-infrared rebrightening time. Monthly Notices of the Royal Astronomical Society, 2016, 463, 4311-4316.	1.6	8
18	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.	1.9	48

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19	BAHAMAS: NEW ANALYSIS OF TYPE Ia SUPERNOVAE REVEALS INCONSISTENCIES WITH STANDARD COSMOLOGY. <i>Astrophysical Journal</i> , 2016, 827, 1.	1.6	57
20	DARWIN: towards the ultimate dark matter detector. <i>Journal of Cosmology and Astroparticle Physics</i> , 2016, 2016, 017-017.	1.9	288
21	The Efficiency of Next-Generation Gibbs-Type Samplers: An Illustration Using a Hierarchical Model in Cosmology. <i>ICSA Book Series in Statistics</i> , 2016, , 167-184.	0.0	0
22	Dark matter interpretations of ATLAS searches for the electroweak production of supersymmetric particles in $\sqrt{s} = 8$ TeV proton-proton collisions. <i>Journal of High Energy Physics</i> , 2016, 2016, 1.	1.6	16
23	BAYESIAN ANALYSIS OF COSMIC RAY PROPAGATION: EVIDENCE AGAINST HOMOGENEOUS DIFFUSION. <i>Astrophysical Journal</i> , 2016, 824, 16.	1.6	121
24	Profile likelihood maps of a 15-dimensional MSSM. <i>Journal of High Energy Physics</i> , 2014, 2014, 1.	1.6	44
25	The best inflationary models after Planck. <i>Journal of Cosmology and Astroparticle Physics</i> , 2014, 2014, 039-039.	1.9	141
26	Compatibility of Planck and BICEP2 results in light of inflation. <i>Physical Review D</i> , 2014, 90, .	1.6	41
27	Life, the universe, and everything. <i>Significance</i> , 2014, 11, 48-75.	0.3	3
28	Global fits of the cMSSM and NUHM including the LHC Higgs discovery and new XENON100 constraints. <i>Journal of Cosmology and Astroparticle Physics</i> , 2013, 2013, 013-013.	1.9	89
29	Taming astrophysical bias in direct dark matter searches. <i>Journal of Cosmology and Astroparticle Physics</i> , 2013, 2013, 041-041.	1.9	34
30	Cosmology and Fundamental Physics with the Euclid Satellite. <i>Living Reviews in Relativity</i> , 2013, 16, 6.	8.2	683
31	Special Issue on Astrostatistics. <i>Statistical Analysis and Data Mining</i> , 2013, 6, 1-2.	1.4	0
32	Recent Advances in Bayesian Inference in Cosmology and Astroparticle Physics Thanks to the MultiNest Algorithm. <i>Springer Series in Astrostatistics</i> , 2013, , 107-119.	0.6	0
33	Improved Cosmological Constraints from a Bayesian Hierarchical Model of Supernova Type Ia Data. , 2013, , 203-235.		0
34	Dark Matter searches: the nightmare scenario. <i>Journal of Cosmology and Astroparticle Physics</i> , 2012, 2012, 004-004.	1.9	14
35	Evidence for dark matter modulation in CoGeNT?. <i>Journal of Cosmology and Astroparticle Physics</i> , 2012, 2012, 008-008.	1.9	14
36	Updated global fits of the cMSSM including the latest LHC SUSY and Higgs searches and XENON100 data. <i>Journal of Cosmology and Astroparticle Physics</i> , 2012, 2012, 030-030.	1.9	68

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37	Global fits of the cMSSM including the first LHC and XENON100 data. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 015-015.	1.9	53
38	Fundamental statistical limitations of future dark matter direct detection experiments. Physical Review D, 2012, 86, .	1.6	38
39	Complementarity of indirect and accelerator dark matter searches. Physical Review D, 2012, 85, .	1.6	21
40	Recent Advances in Cosmological Bayesian Model Comparison. , 2012, , 3-15.		0
41	Cosmological Bayesian Model Selection: Recent Advances and Open Challenges. Lecture Notes in Statistics, 2012, , 127-140.	0.1	0
42	Global fits of the nonuniversal Higgs model. Physical Review D, 2011, 83, .	1.6	26
43	Quantifying the tension between the Higgs mass and $(g\hat{\alpha}^2)^{1/4}$ in the constrained MSSM. Physical Review D, 2011, 84, .	1.6	4
44	Complementarity of dark matter direct detection targets. Physical Review D, 2011, 83, .	1.6	82
45	Global fits of the minimal universal extra dimensions scenario. Physical Review D, 2011, 83, .	1.6	20
46	Hunting down the best model of inflation with Bayesian evidence. Physical Review D, 2011, 83, .	1.6	69
47	CONSTRAINTS ON COSMIC-RAY PROPAGATION MODELS FROM A GLOBAL BAYESIAN ANALYSIS. Astrophysical Journal, 2011, 729, 106.	1.6	268
48	Should we doubt the cosmological constant?. Monthly Notices of the Royal Astronomical Society, 2011, 410, 2488-2496.	1.6	20
49	Designing decisive detections. Monthly Notices of the Royal Astronomical Society, 2011, 414, 2337-2344.	1.6	10
50	Robustness to systematics for future dark energy probes. Monthly Notices of the Royal Astronomical Society, 2011, 415, 143-152.	1.6	31
51	Improved constraints on cosmological parameters from Type Ia supernova data. Monthly Notices of the Royal Astronomical Society, 2011, 418, 2308-2329.	1.6	75
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.	1.2	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.	1.6	31
54	Challenges of profile likelihood evaluation in multi-dimensional SUSY scans. Journal of High Energy Physics, 2011, 2011, 1.	1.6	62

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55	Publisher's Note: Global fits of the nonuniversal Higgs model [Phys. Rev. D, 015014 (2011)]. Physical Review D, 2011, 83, .	1.6	0
56	The virtues of frugality – why cosmological observers should release their data slowly. Monthly Notices of the Royal Astronomical Society: Letters, 2010, 401, L15-L18.	1.2	2
57	Identification of dark matter particles with LHC and direct detection data. Physical Review D, 2010, 82, .	1.6	50
58	Efficient reconstruction of constrained MSSM parameters from LHC data: A case study. Physical Review D, 2010, 82, .	1.6	22
59	Prospects for dark matter detection with IceCube in the context of the CMSSM. Journal of Cosmology and Astroparticle Physics, 2009, 2009, 034-034.	1.9	24
60	Indirect Dark Matter detection from Dwarf satellites: joint expectations from astrophysics and supersymmetry. Journal of Cosmology and Astroparticle Physics, 2009, 2009, 014-014.	1.9	113
61	Reconstructing WIMP properties in direct detection experiments including galactic dark matter distribution uncertainties. Journal of Cosmology and Astroparticle Physics, 2009, 2009, 019-019.	1.9	80
62	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.	1.6	48
63	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.	1.5	33
64	Bayes in the sky: Bayesian inference and model selection in cosmology. Contemporary Physics, 2008, 49, 71-104.	0.8	777
65	Monolithic or hierarchical star formation? A new statistical analysis. Monthly Notices of the Royal Astronomical Society, 2008, 384, 1414-1426.	1.6	35
66	Bayesian selection of $\sin^2 \theta_{14}$ within mSUGRA in global fits including WMAP5 results. Journal of High Energy Physics, 2008, 2008, 064-064.	1.6	85
67	The impact of priors and observables on parameter inferences in the constrained MSSM. Journal of High Energy Physics, 2008, 2008, 024-024.	1.6	161
68	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.	1.9	13
69	Direct dark matter detection around the corner? Prospects in the Constrained MSSM. Journal of Physics: Conference Series, 2007, 60, 259-263.	0.3	5
70	Implications for the Constrained MSSM from a new prediction for \hat{m}_t^3 . Journal of High Energy Physics, 2007, 2007, 075-075.	1.6	121
71	On the detectability of the CMSSM light Higgs boson at the Tevatron. Journal of High Energy Physics, 2007, 2007, 084-084.	1.6	41
72	Prospects for direct dark matter detection in the constrained MSSM. New Astronomy Reviews, 2007, 51, 316-320.	5.2	40

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73	Applications of Bayesian model selection to cosmological parameters. Monthly Notices of the Royal Astronomical Society, 2007, 378, 72-82.	1.6	239
74	Forecasting the Bayes factor of a future observation. Monthly Notices of the Royal Astronomical Society, 2007, 378, 819-824.	1.6	47
75	The isocurvature fraction after WMAP 3-yr data. Monthly Notices of the Royal Astronomical Society: Letters, 2007, 375, L26-L30.	1.2	48
76	PROSPECTS FOR DIRECT DARK MATTER SEARCHES IN THE CONSTRAINED MSSM. , 2007, , .		0
77	What's the trouble with anthropic reasoning?. AIP Conference Proceedings, 2006, , .	0.3	2
78	Surveying the dark side. Astronomy and Geophysics, 2006, 47, 4.20-4.27.	0.1	14
79	Measuring the effective complexity of cosmological models. Physical Review D, 2006, 74, .	1.6	109
80	A Markov chain Monte Carlo analysis of the CMSSM. Journal of High Energy Physics, 2006, 2006, 002-002.	1.6	167
81	Why Anthropic Reasoning Cannot Predict. Physical Review Letters, 2006, 97, 201301.	2.9	22
82	TESTING THE PARADIGM OF ADIABATICITY. , 2006, , .		0
83	COSMOLOGICAL BAYESIAN MODEL SELECTION. , 2006, , .		0
84	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.	2.9	66
85	Constraints on a mixed inflaton and curvaton scenario for the generation of the curvature perturbation. Physical Review D, 2004, 70, .	1.6	62
86	Constraining the helium abundance with CMB data. Physical Review D, 2004, 69, .	1.6	53
87	Measuring $\hat{\tau}$ 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.	1.6	63
88	WMAP constraints on varying $\hat{\tau}$ and the promise of reionization. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 585, 29-34.	1.5	61
89	The cosmological constant and the paradigm of adiabaticity. New Astronomy Reviews, 2003, 47, 769-774.	5.2	6
90	New constraints on varying $\hat{\tau}$. New Astronomy Reviews, 2003, 47, 863-869.	5.2	25

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91	Cosmological constant and general isocurvature initial conditions. <i>Physical Review D</i> , 2003, 67, .	1.6	25
92	Measuring $\Omega_b h^2$ in the early universe: CMB temperature, large-scale structure, and Fisher matrix analysis. <i>Physical Review D</i> , 2002, 66, .	1.6	43
93	The impact of an extra background of relativistic particles on the cosmological parameters derived from the cosmic microwave background. <i>Monthly Notices of the Royal Astronomical Society</i> , 2002, 334, 760-768.	1.6	84
94	Cosmic Microwave Background Anisotropies with Mixed Isocurvature Perturbations. <i>Physical Review Letters</i> , 2001, 87, 231301.	2.9	58
95	Reconstructing the history of dark energy using maximum entropy. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 380, 865-876.	1.6	28
96	Bayesian calibrated significance levels applied to the spectral tilt and hemispherical asymmetry. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 382, 1859-1863.	1.6	55
97	Bayesian experimental design and model selection forecasting. , 0, , 99-125.		1