Pran Nath

List of Publications by Year in Descending Order

158 papers	7,568 citations	41 h-index	84 g-index
171 ext. papers	7,772 ext. citations	5.2 avg, IF	6.12 L-index

#	Paper	IF	Citations
158	Xenon-1T excess as a possible signal of a sub-GeV hidden sector dark matter. *Journal of High Energy Physics*, **2021**, 2021, 1	5.4	6
157	Self-interacting hidden sector dark matter, small scale galaxy structure anomalies, and a dark force. *Physical Review D*, **2021**, 103,	4.9	6
156	Yukawa coupling unification in an SO(10) model consistent with Fermilab (g 2) result. *Journal of High Energy Physics*, **2021**, 2021, 1	5.4	6
155	A multi-temperature universe can allow a sub-MeV dark photon dark matter. *Journal of High Energy Physics*, **2021**, 2021, 1	5.4	2
154	Corrections to Yukawa couplings from higher dimensional operators in a natural SUSY SO(10) and HL-LHC implications. *Journal of High Energy Physics*, **2021**, 2021, 1	5.4	4
153	What the Fermilab muon g 2 experiment tells us about discovering supersymmetry at high luminosity and high energy upgrades to the LHC. *Physical Review D*, **2021**, 104,	4.9	9
152	A decaying neutralino as dark matter and its gamma ray spectrum. *European Physical Journal C*, **2021**, 81, 1	4.2	2
151	A cosmologically consistent millicharged dark matter solution to the EDGES anomaly of possible string theory origin. *Journal of High Energy Physics*, **2021**, 2021, 1	5.4	2
150	Supersymmetry unification, naturalness, and discovery prospects at HL-LHC and HE-LHC. *European Physical Journal: Special Topics*, **2020**, 229, 3047-3059	2.3	0
149	Expanding the parameter space of natural supersymmetry. *Journal of High Energy Physics*, **2020**, 2020, 1	5.4	5
148	A long-lived stop with freeze-in and freeze-out dark matter in the hidden sector. *Journal of High Energy Physics*, **2020**, 2020, 1	5.4	5
147	Supersymmetric Dirac-Born-Infeld axionic inflation and non-Gaussianity. *Journal of High Energy Physics*, **2019**, 2019, 1	5.4	1
146	High energy physics and cosmology at the unification frontier: Opportunities and challenges in the coming years. *International Journal of Modern Physics A*, **2018**, 33, 1830017	1.2	4
145	Observables of low-lying supersymmetric vectorlike leptonic generations via loop corrections. *Physical Review D*, **2018**, 98,	4.9	1
144	Supersymmetry at a 28 TeV hadron collider: HE-LHC. *Physical Review D*, **2018**, 98,	4.9	19
143	Evidence for inflation in an axion landscape. *Journal of High Energy Physics*, **2018**, 2018, 1	5.4	3
142	Baryogenesis and dark matter in U(1) extensions. *Modern Physics Letters A*, **2017**, 32, 1740005	1.3	4

141	Supergravity models with 50−100 TeV scalars, supersymmetry discovery at the LHC, and gravitino decay constraints. *Physical Review D*, **2017**, 96,	4.9	10
140	Flavor violating top decays and flavor violating quark decays of the Higgs boson. *International Journal of Modern Physics A*, **2017**, 32, 1750135	1.2	1
139	Stau coannihilation, compressed spectrum, and SUSY discovery potential at the LHC. *Physical Review D*, **2017**, 95,	4.9	14
138	A stronger case for superunification post Higgs boson discovery. *Physica Scripta*, **2017**, 92, 124005	2.6	3
137	Ultralight axion in supersymmetry and strings and cosmology at small scales. *Physical Review D*, **2017**, 96,	4.9	22
136	Supersymmetry after the Higgs. *Annalen Der Physik*, **2016**, 528, 167-178	2.6	3
135	An analysis of B−=2 operators from matter-Higgs interactions in a class of supersymmetric SO(10) models. *Physical Review D*, **2016**, 93,	4.9	10
134	Gluino coannihilation and observability of gluinos at LHC run II. *Physical Review D*, **2016**, 93,	4.9	15
133	Higgs boson mass constraint and the CP even-CP odd Higgs boson mixing in an MSSM extension. *Physical Review D*, **2016**, 94,	4.9	2
132	Flavor violating leptonic decays of the Higgs boson. *Physical Review D*, **2016**, 94,	4.9	3
131	ATLAS diboson excess from Stueckelberg mechanism. *Journal of High Energy Physics*, **2016**, 2016, 1-15	5.4	2
130	Leptonic g−2 moments, CP phases, and the Higgs boson mass constraint. *Physical Review D*, **2016**, 94,	4.9	11
129	Sparticle mass hierarchies, simplified models from SUGRA unification, and benchmarks for LHC Run-II SUSY searches. *Journal of High Energy Physics*, **2015**, 2015, 1	5.4	16
128	Neutron electric dipole moment and probe of PeV scale physics. *Physical Review D*, **2015**, 91,	4.9	5
127	Chromoelectric dipole moments of quarks in MSSM extensions. *Physical Review D*, **2015**, 92,	4.9	9
126	Light stops and observation of supersymmetry at LHC run II. *Physical Review D*, **2015**, 92,	4.9	17
125	−e−decay in an MSSM extension. *Physical Review D*, **2015**, 92,	4.9	10
124	Large neutrino magnetic dipole moments in MSSM extensions. *Physical Review D*, **2014**, 89,	4.9	11

123	Probe of new physics using precision measurement of the electron magnetic moment. *Physical Review D*, **2014**, 89,	4.9	6
122	Electron electric dipole moment as a sensitive probe of PeV scale physics. *Physical Review D*, **2014**, 90,	4.9	26
121	3.5 keV galactic emission line as a signal from the hidden sector. *Physical Review D*, **2014**, 90,	4.9	7
120	Higgs boson mass, proton decay, naturalness, and constraints of the LHC and Planck data. *Physical Review D*, **2013**, 87,	4.9	36
119	Perspectives on Higgs boson and supersymmetry. *Frontiers of Physics*, **2013**, 8, 294-301	3.7	1
118	decay in extensions with a vectorlike generation. *Physical Review D*, **2013**, 87,	4.9	14
117	Higgs diphoton rate and mass enhancement with vectorlike leptons and the scale of supersymmetry. *Physical Review D*, **2013**, 87,	4.9	15
116	Baryogenesis from dark matter. *Physical Review D*, **2013**, 88,	4.9	9
115	Radiative decays of cosmic background neutrinos in extensions of the MSSM with a vectorlike lepton generation. *Physical Review D*, **2013**, 88,	4.9	14
114	Naturalness, supersymmetry and implications for LHC and dark matter. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2012**, 709, 192-199	4.2	76
113	R-parity conservation via the Stueckelberg mechanism: LHC and Dark Matter Signals. *Journal of High Energy Physics*, **2012**, 2012, 1	5.4	32
112	Higgs boson mass predictions in supergravity unification, recent LHC-7 results, and dark matter. *Physical Review D*, **2012**, 85,	4.9	73
111	Implications of the Higgs boson discovery for mSUGRA. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2012**, 717, 188-192	4.2	74
110	Variety of SO(10) GUTs with natural doublet-triplet splitting via the missing partner mechanism. *Physical Review D*, **2012**, 85,	4.9	29
109	THE DEVELOPMENT OF SUPERGRAVITY GRAND UNIFICATION: CIRCA 1982–1985. *International Journal of Modern Physics A*, **2012**, 27, 1230028	1.2	14
108	HIGGS PHYSICS AND SUPERSYMMETRY. *International Journal of Modern Physics A*, **2012**, 27, 1230029	1.2	26
107	Predictive signatures of supersymmetry: Measuring the dark matter mass and gluino mass with early LHC data. *Physical Review D*, **2011**, 84,	4.9	22
106	Low mass gluino within the sparticle landscape, implications for dark matter, and early discovery prospects at LHC-7. *Physical Review D*, **2011**, 83,	4.9	30

105	Chromoelectric dipole moment of the top quark in models with vectorlike multiplets. *Physical Review D*, **2011**, 84,	4.9	32
104	Excess observed in CDF Bs0->□□and supersymmetry at the LHC. *Physical Review D*, **2011**, 84,	4.9	12
103	Higgsino dark matter model consistent with galactic cosmic ray data and possibility of discovery at LHC-7. *Physical Review D*, **2011**, 83,	4.9	8
102	NEW CONSTRAINTS ON DARK MATTER FROM CMS AND ATLAS DATA. *Modern Physics Letters A*, **2011**, 26, 1521-1535	1.3	34
101	Developments in Supergravity Unified Models. *Advanced Series on Directions in High Energy Physics*, **2010**, 222-243	0	
100	Top quark electric dipole moment in a minimal supersymmetric standard model extension with vectorlike multiplets. *Physical Review D*, **2010**, 82,	4.9	35
99	PREDICTED SIGNATURES AT THE LHC FROM U(1) EXTENSIONS OF THE STANDARD MODEL. *Modern Physics Letters A*, **2010**, 25, 3003-3016	1.3	4
98	HIGH SCALE PHYSICS CONNECTION TO LHC DATA. *International Journal of Modern Physics A*, **2010**, 25, 5647-5665	1.2	1
97	Connecting the direct detection of dark matter with observation of sparticles at the LHC. *Physical Review D*, **2010**, 81,	4.9	15
96	Yukawa couplings and quark and lepton masses in an SO(10) model with a unified Higgs sector. *Physical Review D*, **2010**, 81,	4.9	23
95	Large tau and tau neutrino electric dipole moments in models with vectorlike multiplets. *Physical Review D*, **2010**, 81,	4.9	28
94	Low mass neutralino dark matter in the minimal supersymmetric standard model with constraints from Bs->□□and Higgs boson search limits. *Physical Review D*, **2010**, 81,	4.9	52
93	Multicomponent dark matter in supersymmetric hidden sector extensions. *Physical Review D*, **2010**, 81,	4.9	57
92	PAMELA positron excess as a signal from the hidden sector. *Physical Review D*, **2009**, 79,	4.9	131
91	Gluino NLSP, dark matter via gluino coannihilation, and LHC signatures. *Physical Review D*, **2009**, 80,	4.9	53
90	Explaining PAMELA and WMAP data through coannihilations in extended SUGRA with collider implications. *Physical Review D*, **2009**, 80,	4.9	34
89	CP violation from the standard model to strings. *Reviews of Modern Physics*, **2008**, 80, 577-631	40.5	78
88	Suppression of Higgsino mediated proton decay by cancellations in grand unified theories and strings. *Physical Review D*, **2008**, 77,	4.9	13

87	MSSM extension with a mirror fourth generation, neutrino magnetic moments, and CERN LHC signatures. *Physical Review D*, **2008**, 78,	4.9	33
86	Extra-weakly interacting dark matter. *Physical Review D*, **2007**, 75,	4.9	76
85	Proton stability in grand unified theories, in strings and in branes. *Physics Reports*, **2007**, 441, 191-317	27.7	263
84	Landscape of supersymmetric particle mass hierarchies and their signature space at the CERN Large Hadron Collider. *Physical Review Letters*, **2007**, 99, 251802	7.4	57
83	An improved analysis of b->s□n supersymmetry. *Physical Review D*, **2006**, 74,	4.9	53
82	Fermion mass generation in SO(10) with a unified Higgs sector. *Physical Review D*, **2006**, 74,	4.9	40
81	Unified framework for symmetry breaking in SO(10). *Physical Review D*, **2005**, 72,	4.9	46
80	WMAP dark matter constraints and Yukawa unification in supergravity models with CP phases. *Physical Review D*, **2005**, 72,	4.9	37
79	SOFT BREAKING IN SUSY, STRING AND INTERSECTING D BRANE MODELS. *International Journal of Modern Physics A*, **2005**, 20, 1320-1327	1.2	
78	Modular invariant soft breaking, WMAP, dark matter, and sparticle mass limits. *Physical Review D*, **2004**, 70,	4.9	2
77	Sensitivity of supersymmetric dark matter to the b quark mass. *Physical Review D*, **2004**, 70,	4.9	32
76	Effective Lagrangian for the □+□□H□nteraction in the minimal supersymmetric standard model and charged Higgs decays. *Physical Review D*, **2004**, 70,	4.9	13
75	Coupling the supersymmetric 210 vector multiplet to matter in SO(10). *Nuclear Physics B*, **2004**, 676, 64-98	2.8	17
74	Effective action and soft supersymmetry breaking for intersecting D-brane models. *Nuclear Physics B*, **2004**, 681, 77-119	2.8	56
73	WMAP constraints, supersymmetric dark matter, and implications for the direct detection of supersymmetry. *Physical Review D*, **2003**, 68,	4.9	225
72	Neutralino exchange corrections to the Higgs boson mixings with explicit CP violation. *Physical Review D*, **2002**, 66,	4.9	62
71	b□unification, g□, the b->s+□constraint, and nonuniversalities. *Physical Review D*, **2002**, 65,	4.9	70
70	Analysis of couplings with large tensor representations in SO(2N) and proton decay. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2001**, 506, 68-76	4.2	42

69	Upper limits on sparticle masses from g -- 2 and the possibility for discovery of supersymmetry at colliders and in dark matter searches. *Physical Review Letters*, **2001**, 86, 5854-7	7.4	92
68	Gaugino mass nonuniversality and dark matter in supergravity, strings, and D-brane models. *Physical Review D*, **2001**, 64,	4.9	137
67	Corrections to the Higgs boson masses and mixings from chargino, W, and charged Higgs exchange loops and large CP phases. *Physical Review D*, **2001**, 63,	4.9	95
66	Complete cubic and quartic couplings of 16 and in SO(10) unification. *Nuclear Physics B*, **2001**, 618, 138-158	2.8	37
65	OUT-GOING MUON FLUX FROM NEUTRALINO ANNIHILATION IN THE SUN AND THE EARTH IN SUPERGRAVITY UNIFICATION. *International Journal of Modern Physics A*, **2000**, 15, 905-914	1.2	23
64	Effects of large CP phases on the proton lifetime in supersymmetric unification. *Physical Review D*, **2000**, 62,	4.9	15
63	Large CP phases and the cancellation mechanism in EDMs in SUSY, string, and brane models. *Physical Review D*, **2000**, 61,	4.9	101
62	Cosmological constraints on supergravity unified models. *Physics Reports*, **1998**, 307, 215-226	27.7	1
61	Naturalness, weak scale supersymmetry, and the prospect for the observation of supersymmetry at the Fermilab Tevatron and at the CERN LHC. *Physical Review D*, **1998**, 58,	4.9	300
60	Neutron and electron electric dipole moment in N=1 supergravity unification. *Physical Review D*, **1998**, 57, 478-488	4.9	282
59	Neutron and lepton electric dipole moments in the minimal supersymmetric standard model, large CP violating phases, and the cancellation mechanism. *Physical Review D*, **1998**, 58,	4.9	243
58	ACCURATE COSMOLOGICAL PARAMETERS AND SUPERSYMMETRIC PARTICLE PROPERTIES. *Modern Physics Letters A*, **1998**, 13, 2239-2245	1.3	1
57	SUPERGRAVITY UNIFIED MODELS. *Advanced Series on Directions in High Energy Physics*, **1998**, 442-461	0	1
56	Nonuniversal soft supersymmetry breaking and dark matter. *Physical Review D*, **1997**, 56, 2820-2832	4.9	186
55	Rb in supergravity grand unification with nonuniversal soft supersymmetry breaking. *Physical Review D*, **1997**, 56, 4194-4197	4.9	1
54	Detecting physics at the post-grand-unified-theory and string scales by linear colliders. *Physical Review D*, **1997**, 56, 2833-2841	4.9	14
53	Textured minimal and extended supergravity unification and implications for proton stability. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1996**, 381, 147-153	4.2	13
52	Probing supergravity grand unification in the Brookhaven g-2 experiment. *Physical Review D*, **1996**, 53, 1648-1657	4.9	176

51	Predictions of neutralino dark matter event rates in minimal supergravity unification. *Physical Review D*, **1996**, 54, 2374-2384	4.9	70
50	Hierarchies and textures in supergravity unification. *Physical Review Letters*, **1996**, 76, 2218-2221	7.4	26
49	Constraints on the minimal supergravity model from the b-->s gamma decay. *Physical Review D*, **1995**, 51, 1371-1376	4.9	23
48	Event rates in dark matter detectors for neutralinos including constraints from b-->s gamma decay. *Physical Review Letters*, **1995**, 74, 4592-4595	7.4	85
47	Landau pole effects and the parameter space of the minimal supergravity model. *Physical Review D*, **1995**, 52, 4169-4177	4.9	12
46	Effects of gravitational smearing on predictions of supergravity grand unification. *Physical Review D*, **1995**, 52, 5366-5369	4.9	40
45	NEUTRALINO EVENT RATES IN DARK MATTER DETECTORS. *Modern Physics Letters A*, **1995**, 10, 1257-1267	1.3	18
44	Testing supergravity grand unification at future accelerator and underground experiments. *Physical Review D*, **1994**, 49, 1479-1485	4.9	38
43	Predictions in SU(5) supergravity grand unification with proton stability and relic density constraints. *Physical Review Letters*, **1993**, 70, 3696-3699	7.4	144
42	Supersymmetric mass spectrum in SU(5) supergravity grand unification. *Physical Review Letters*, **1992**, 69, 725-728	7.4	236
41	Loop corrections to radiative breaking of electroweak symmetry in supersymmetry. *Physical Review D*, **1992**, 46, 3981-3986	4.9	117
40	CP violation via electroweak gauginos and the electric dipole moment of the electron. *Physical Review Letters*, **1991**, 66, 2565-2568	7.4	163
39	micro-->e+ gamma and tau --> micro+ gamma decays in string models with E6 symmetry. *Physical Review Letters*, **1991**, 66, 2708-2711	7.4	25
38	Light Higgs bosons in three-generation Calabi-Yau superstring theory. *Physical Review D*, **1991**, 43, 3739-3747	4.9	1
37	(27)3 YUKAWA COUPLINGS AND EMBEDDINGS OF DISCRETE GROUPS IN THE $CP^3times CP^2/Z_3times ZQ3$ MODEL. *International Journal of Modern Physics A*, **1991**, 06, 381-393	1.2	6
36	Predictions from three-generation Calabi-Yau string theory. *Physical Review D*, **1990**, 42, 2948-2951	4.9	7
35	Proton decay in three-generation matter-parity-invariant superstring models. *Physical Review Letters*, **1989**, 62, 2225-2228	7.4	45
34	Matter-parity constraints on particle spectrum in three-generation Calabi-Yau manifolds. *Physical Review D*, **1989**, 40, 191-199	4.9	23

33	Matter parity, intermediate scale breaking, and sin2 theta W in Calabi-Yau superstring models. *Physical Review Letters*, **1989**, 62, 1437-1440	7.4	7
32	Symmetry breaking in three-generation Calabi-Yau manifolds. *Physical Review D*, **1989**, 39, 2006-2012	4.9	36
31	Intermediate mass scale in rank-six superstring models. *Physical Review Letters*, **1988**, 60, 1817-1820	7.4	23
30	Limits on photino and squark masses from proton lifetime in supergravity models. *Physical Review D*, **1988**, 38, 1479-1484	4.9	54
29	WEAK GAUGINO PRODUCTION AT THE SSC. *International Journal of Modern Physics A*, **1987**, 02, 1113-1120	2.2	15
28	Supersymmetry signals in leptonic decays of W and Z bosons. *Physical Review D*, **1987**, 35, 1085-1087	4.9	12
27	Fourth generation and nucleon decay in supersymmetric theories. *Physical Review D*, **1987**, 36, 3423-3428	4.9	3
26	Probing the Four-Generation Kobayashi-Maskawa Matrix with Supergravity Proton Decay. *Annals of the New York Academy of Sciences*, **1987**, 518, 337-343	6.5	1
25	Supersymmetric ten-dimensional low-energy limit of superstring theory. *Physical Review D*, **1986**, 34, 3769-3779	4.9	6
24	Nucleon decay branching ratios in supergravity SU(5) GUTs. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1985**, 156, 215-219	4.2	52
23	Nucleon decay in supergravity unified theories. *Physical Review D*, **1985**, 32, 2348-2358	4.9	133
22	Gauge hierarchy in supergravity GUTS. *Nuclear Physics B*, **1983**, 227, 121-133	2.8	226
21	Masses of Superpartners of Quarks, Leptons, and Gauge Mesons in Supergravity Grand Unified Theories. *Physical Review Letters*, **1983**, 50, 232-235	7.4	121
20	Comment on effective-Lagrangian formulations of the U(1) axial anomaly. *Physical Review D*, **1982**, 25, 595-600	4.9	2
19	Locally Supersymmetric Grand Unification. *Physical Review Letters*, **1982**, 49, 970-974	7.4	1321
18	U(1) problem: Current algebra and the vacuum. *Physical Review D*, **1981**, 23, 473-476	4.9	152
17	Superconnections in Extended Supergravity. *Physical Review Letters*, **1980**, 44, 223-226	7.4	3
16	Globally supersymmetric Green functions in quantum gauge supersymmetry. *Physica A: Statistical Mechanics and Its Applications*, **1979**, 96, 111-119	3.3	3

15	Ultraviolet Finiteness of All Quantum Loops in Gauge Supersymmetry. *Physical Review Letters*, **1979**, 42, 138-141	7.4	8
14	Quantum effects on the vacuum symmetries of gauge supersymmetry. *Physical Review D*, **1978**, 18, 2759-2767	4.9	6
13	Origin of internal symmetry. *Physical Review D*, **1977**, 15, 1033-1043	4.9	10
12	Riemannian geometry in spaces with Grassman coordinates. *General Relativity and Gravitation*, **1976**, 7, 89-103	2.3	39
11	Spontaneous Symmetry Breaking of Gauge Supersymmetry. *Physical Review Letters*, **1976**, 36, 1526-1529	7.4	27
10	Generalized Potential for the Pion-Nucleon System. *Physical Review*, **1968**, 166, 1532-1538		1
9	Asymptotic Behavior of Form Factors. *Physical Review*, **1967**, 160, 1406-1410		
8	Reggeized Bootstrap of the K* Meson. *Physical Review*, **1967**, 163, 1815-1819		1
7	Kronecker-Delta-Type Singularities and Reggeization. *Physical Review*, **1966**, 142, 982-983		2
6	Is the Nucleon a $\bar{N}N$ Bound State?. *Physical Review*, **1966**, 152, 1254-1258		4
5	Effect of an Inelastic Channel on the Position and Width of a Resonance. *Physical Review*, **1965**, 138, B404-B407		3
4	Multichannel Effective-Range Theory from the ND Formalism. *Physical Review*, **1965**, 138, B702-B706		5
3	Uncoupled-Phase Method in the Multichannel ND Formalism. *Physical Review*, **1965**, 137, B711-B716		3
2	Coupled-Channel Scattering with Complex Angular Momentum. *Physical Review*, **1965**, 138, B726-B731		2
1	The Uncoupled Phase Method for Interactions with Hard Cores. *Physical Review*, **1964**, 133, B1085-B1089		5