

PROBIR ROY
LIST OF PUBLICATIONS
Books and edited volumes

*1.	Probir Roy	(1975)	“Theory of Lepton-Hadron Processes At High Energies”	Clarendon Press, Oxford
2.	V.S. Narasimham, Probir Roy, K.V.L. Sarma, B.V. Sreekantan (editors)	(1982)	“ICOBAN 1982: Proceedings of the International Colloquium On Baryon Nonconservation”	Pramana J. Phys. Suppl. issue
3.	Probir Roy and Virendra Singh (editors)	(1984)	“Supersymmetry-Supergravity/Nonperturbative QCD”. Proceedings of Mahabaleshwar Winter School	Springer Lecture Notes In Physics, Vol. 208
4.	D.P. Roy and Probir Roy (editors)	(1989)	“Phenomenology of the Standard Model and Beyond”. Proceedings of the Workshop on High Energy Physics Phenomenology”	World Scientific Singapore
5.	Sunanda Banerjee and Probir Roy (editors)	(1993)	Proceedings of the X DAE High Energy Physics Symposium	Pramana J. Phys. Suppl. 41 (1993)
6.	Rohini Godbole, Manuel Drees and Probir Roy	(2004)	“Theory and Phenomenology of Sparticles”	World Scientific (Singapore).

* Reviews: Nature 257, 519 (1975). The London Times Higher Educational Supplement, 18 April 1975. Phys. Bulletin **26**, 280 (1975). Applied Physics **8**, No. 4 (1975). Phys. Today **30**, 44 (1977). The Australian Physicist, April 1977.

Excerpts from reviews of “Theory of Lepton-Hadron Processes at High Energies”

“The choice of topics is admirable ... the book is very clear and should prove useful to anyone seeking an introduction to this fascinating subject”.

– C.H. Llewellyn Smith, *Physics Bulletin*, vol. 26 (1975)

“... an admirable attempt ... The subject is clearly and concisely explained by Dr Roy and its connection with experiment stressed”.

– I.G. Halliday in *The Times Educational Supplement* (18 April, 1975)

“The book is likely to be useful to second year graduate students and ‘above’ ”.

– C. Wilkins, *Nature* (9 October, 1975).

“This work is definitely relevant to current research.”

– L. Litt, *Physics Today* (February, 1977).

Papers and Articles

1.	Probir Roy	"Generalized Pole Dominance Hypothesis, Current Algebra And S-wave $K^+ P$ Scattering"	Phys. Rev. 162 (1967) 1644
2.	Probir Roy	" $K\pi$ Scattering, Kappa Meson and Current Algebra"	Phys. Rev. 168 (1968) 1708
3.	S.M. Berman & Probir Roy	"Soft Pion Theorems And The $K_{\ell 3}, K_{\ell 4}$ Form Factors"	Phys. Lett. 27B (1968) 88
4.	S.M. Berman & Probir Roy	"Near Kappa- K Mass Degeneracy and the $K_{\ell 3}$ Form Factors"	Phys. Lett. 28B (1968) 326
5.	P. Horwitz & Probir Roy	"How Good Are the Hard-Pion Calculations Near the A_1 -Mass?"	Phys. Rev. 180 (1969) 1430
6.	J. Pestieau & Probir Roy	"Lepton Symmetry And Self-mass"	Phys. Rev. Lett. 23 (1969) 349
7.	J. Pestieau & Probir Roy	"Current Commutators And High Energy Hadron Production in e^+e^- Annihilation"	Phys. Lett. 30B (1969) 483
8.	Probir Roy	"Tests of Vector dominance In e^+e^- Collisions Above 1 GeV"	Nucl. Phys. B15 (1970) 35
9.	J. Pestieau, Probir Roy & H. Terazawa	"Range of Virtual Photons In Deep Inelastic eP Scattering"	Phys. Rev. Lett. 25 (1970) 402
10.	T. Kinoshita, J. Pestieau Probir Roy & H. Terazawa	"Possible Tests of Anomalously Large Leptonic Weak Interactions in High Energy e^+e^- Collisions".	Phys. Rev. D2 (1970) 910
11.	J. Pestieau & Probir Roy	"Comments On The Leading Light-Cone Behaviour In Photoabsorption and Electroproduction"	Lett. Nuov. Cim. 4 (1970) 1083
12.	S. Brodsky & Probir Roy	"Parton Model and Inelastic Processes with Two Photons"	Phys. Rev. D3 (1971) 2914
13.	Probir Roy	"Single Particle Electro-production at Large Q^2 and the Role of Wee Partons"	Phys. Lett. 36B (1971) 579

14.	Probir Roy	“Parton Model For The Electro-production Of Single Hadrons With Highly Virtual Photons”	Phys. Rev. D5 (1971) 227
15.	Probir Roy	“Short Distance Scale Invariance and the Structure Of Weak Transitions”	Phys. Rev. D5 (1972) 1180
16.	M.K. Gaillard & Probir Roy	“Role of the Short Distance Effect In Non-leptonic Radiative Decays”	Phys. Lett. 38B (1972) 245
17.	Probir Roy	“Inclusive Soft Pion Production In Inelastic $e\gamma$ Scattering”	Phys. Lett. 39B (1972) 365
18.	C. Jarlskog & Probir Roy	“Deep Inelastic Electron-or Muo-production Of W Bosons: A Test of the Bilocal Algebra”	Nucl. Phys. B48 (1972) 415
19.	Probir Roy	“Parton Description of the Forward Peak In Single Particle Electroproduction With Highly Virtual Photons”	Phys. Lett. 41B (1972) 325
20.	Probir Roy	“Parton-Light Cone Dualism”	Proc. I DAE HEP Symp. (eds. P.K. Malhotra et al TIFR, Bombay, 1972) p.253
21.	T. Das, L.K. Pandit & Probir Roy	“Light-Cone Constraints and Two Astomptotic Domains In Lepton-Nucleon and Meson-Nucleon Scattering”	Phys. Lett. 44B (1973) 76
22.	T. Das, L.K. Pandit & Probir Roy	“Bare Current Quark Masses, Inelastic Reactions and Light-Cone Algebra”	Nucl. Phys. B53 (1973) 567
23.	Probir Roy	“Constraints on Current Fragments in Inclusive Lepton Scattering”	Lett Nuov. Cim. 7 (1973) 175
24.	Probir Roy	“Towards New Dualisms in Particle Physics”	Physics News 4 (1973) 73-77
25.	Probir Roy	“Exact Sum Rules For The Decay Constant of the Neutral Pion”	Phys. Rev. D9 (1974) 2631
26.	T. Das, L.K. Pandit & Probir Roy	“Comments on the High Energy Behaviour of Total Cross Sections Based on Light Cone Algebra”	Pramana J. Phys. 2 (1974) 80-83

27.	G. Bhattacharya & Probir Roy	“Explicit Operator Solution To Thirring Model With U(n) Symmetry”	Phys. Lett. B52 (1974) 461
28.	Probir Roy	“Parton-Light Cone Ideas And Their Confrontation With The Latest Lepton-Hadron Data	Proc. II DAE HEP Symp. (eds. P.K. Malhotra et al TIFR, Bombay, 1974), p.160
29.	G. Bhattacharya & Probir Roy	“Spinor Inverted Solution To Thirring Model And Its Generalization to U(n) Symmetry”	Ann. Phys. 91 (1975) 325
30.	Probir Roy	“Partial Diagonality of Stress Trace”	Pramana J. Phys. 4 (1975) 55-57
31.	H.S. Mani & Probir Roy	“Colliding Beam Test of Neutral Isoscalar Weak Axial Current”	Pramana J. Phys. 6 (1975) 264
32.	G. Bhattacharya & Probir Roy	“Exactly Solvable Two Dimensional U(n) Gauge Field Theory And Its Consequences”	Phys. Rev. D12 (1975) 1721
33.	G. Rajasekaran & Probir Roy	“Effect of Gluons On Neutral-Current Interactions In Deep Inelastic Neutrino Scattering”	Pramana J. Phys. 4 (1975) 222
34.	G. Rajasekaran & Probir Roy	“Colour Gluons And Scaling In A Unified Gauge Model”	Pramana J. Phys. 5 (1975) 303
35.	G. Rajasekaran & Probir Roy	“Colour Gluon Excitation In Fermilab	Phys. Rev. Lett. 36 (1976) 355
36.	A.S. Joshipura & Probir Roy	“Polarized Deep Inelastic Sum Rules”	Nucl. Phys. B116 (1976) 541
37.	A.S. Joshipura & Probir Roy	“New Polarized Neutrino Sum-Rules”	<i>High Energy Physics with Polarized Beams and Targets</i> (ed. M.L. Marshak) American Institute of Physics 1976), p.286.
38.	A.S. Joshipura & Probir Roy	“Melosh Transformation And Light-Cone Current Algebra”	Ann. Phys. 104 (1977) 460
39.	H.S. Mani, V.M. Raval & Probir Roy	“Neutral Current Parity Violation And Gauge Flavours”	Phys. Lett. 68B (1977) 242
40.	G. Bhattacharya & Probir Roy	“An Operatorially Solved Model of Massless Two Dimensional Quantum Chromodynamics”	Nucl. Phys. B133 (1978) 435

41.	V. Gupta & Probir Roy	“What Neutral Current Experiments Call Tell Us About Left-Right Symmetry”	Phys. Lett. 72B (1978) 336
42.	T.F. Walsh & Probir Roy	“Spotting Glueballs In Collinear Gluon Jets”	Phys. Lett. 79B (1978) 62
43.	P. Mitra & Probir Roy	“Operator Solution to Broken QCD(N) ₂ For Massless Quarks”	Phys. Lett. 79B (1978) 469
44.	A. Mukherjee & Probir Roy	“Explicit Classical Solutions To Euclidean Yang-Mills Theory With Spherical Symmetry”	Pramana J. Phys. 11 (1978) 745
45.	Probir Roy	“Glueballs without Gullibility”	Nature (News & Views) 280 (1979) 106
46.	Probir Roy	“The Emergence of a Unified Theory of Weak and Electromagnetic Interactions”	Physics News 10 (1979) 1
47.	A.S. Joshipura & Probir Roy	“Shape And Q^2 -Dpendence Of Proton Spin Structure	Proc. X Int. Symp. <i>Multiparticle Dynamics</i> (eds. S.N. Ganguly et al TIFR, 1979), p.644
48.	P. Mitra & Probir Roy	“Dynamical Symmetry Breakdown In Two-Dimensional Quantum Chromodynamics I: Massless Quarks”	Phys. Rev. D21 (1980) 511
49.	P. Mitra & Probir Roy	“Dynamical Symmetry Breakdown In Two-Dimensional Quantum Chromodynamics II: Boson Representation And Light Quarks”	Phys. Rev. D21 (1980) 521
50.	P. Mitra & Probir Roy	“Dynamical Symmetry Breakdown In Two-Dimensional Quantum Chromodynamics III: The Physical Space”	Phys. Rev. D21 (1980) 2926
51.	A.S. Joshipura & Probir Roy	“Role of Parton Transverse Momenta In Polarized Deep Inelastic Scattering”	Phys. Lett. 92B (1980) 348
52.	Probir Roy	“The Glueball Trail”	Rutherford Laboratory Nimrod Lecture Report No. RL-80-007 (1980)

53.	A. Mukherjee & Probir Roy	“Colour-Generated Angular Momentum With Merons”	Phys. Lett. 97B (1980) 115
54.	R. Chanda & Probir Roy	“Compositeness Resolution And Baryon Nonconservation”	Phys. Lett. 99B (1981) 453
55.	J. Pestieau & Probir Roy	“Historical Note on the Strength of the Neutral Current Weak Interactions”	Lett. Nuov. Cim. 31 (1981) 625
56.	Probir Roy	“Naturalness And Fermion Mass Relations”	Phys. Rev. Lett. 47 (1981) 1785
57.	Probir Roy	“Naturalness And The Top Quark Mass in GUTs”	Proc. 1982 Int. Workshop <i>Field Theory And High Energy Physics</i> (Protvino USSR, ed. A. Logunov) Vol.2, p.147
58.	A.S. Joshipura & Probir Roy	“A Model of Deep Inelastic Polarized Electroproduction”	Nucl. Phys. B195 (1982) 365
59.	A. Raychaudhuri & Probir Roy	“Neutron-Antineutron Oscillation and SO(10) Grand Unification”	Pramana J. Phys. 19 (1982) 237
60.	A. Mukherjee & Probir Roy	“Spin-Isospin Mixing Without Spontaneous Symmetry Breakdown”	Zeits. Phys. C17 (1983) 141
61.	R.M. Godbole & Probir Roy	“Compostiness Resulotion Of The Higgs Boson”	Phys. Rev. Lett. 50 (1983) 717
62.	Probir Roy & O. Shanker	“Observable Neutrino Dirac Mass And Supergrand Unification”	Phys. Rev. Lett. 52 (1984) 713
63.	Probir Roy & O. Shankar	“Ultralight Dirac Neutrinos From Possible Supergrand Scenario”	Phys. Rev. D30 (1984) 1949
64.	P. Majumdar & Probir Roy	“Tightening Light Higgs Masses In Low Energy Supergravity”	Phys. Rev. D30 (1984) 2432
65.	Probir Roy	“The Thin End of the Wedge or How SUGRAGUT-Driven <i>Breaking</i> (ed. I. Hinchliffe, Can Accommodate a Light Top Only Through a Light Higgs”	Proc.Int. Workshop <i>Electroweak Symmetry</i> Lawrence Berkeley Laboratory 1984, LBL 18571), p.49
66.	Probir Roy & O. Shanker	“The Mass of the Neutrino”	Science Reporter 21 (1984) 646

67.	Probir Roy	“Some Aspects of Light Elementary Higgs Particles”	Proc. DAE HEP Symp. University of Jammu (eds. M.V.S. Rao & A. Raina), 1985, p.300
68.	A.S. Joshipura, Probir Roy, O. Shanker, & U. Sarkar	“Superunified Model With Ultralight Dirac Neutrinos”	Phys. Lett. 150B (1985) 270
69.	Probir Roy & P. Majumdar	“Analytic Bounds On All Light Higgs-Boson Masses From Supergravity”	Phys. Rev. D33 (1986) 2674
70.	P. Majumdar & Probir Roy	“Stringent Low Energy Mass-Constraints In No-Scale Supergravity”	Phys. Rev. D34 (1986) 911
71.	Probir Roy(1986)	“Light Higgs Mass Bounds from Supergravity”	<i>Strings, Lattice, Gauge Theory And High Energy Phenomenology</i> (eds. V. Singh and S. Wadia, World Scientific, 1986) p.510
72.	Probir Roy	“Top Quark And Light Higgs Scalar Mass Bounds In No-scale Supergravity”	Proc. XXIII Intl. HEP Conf., Berkeley (ed. S. Loken, 1986, World Scientific) p.387
73.	T. Bhattacharya & Probir Roy	“Constraint On Unstable Photino Mass From A Superlight Gravitino”	Pramana J. Phys. 28 (1987) L699
74.	Probir Roy	“Light Higgs Particles and Supertheories”	Comm. Nucl.Part.Phys. 27 (1987) 293
75.	T. Bhattacharya & Probir Roy	“Probing A Superlight Gravitino In Photon-Photon Collisions”	Phys. Rev. Lett. 59 (1987) 1517
76.	Probir Roy	“Consequences of A Superlight Gravitino”	Proc. Intl. Europhys. Conf. <i>High Energy Physics</i> , (Uppsala, 1987 (ed. O. Botner, World Scientific) Vol. 1, p.422
77.	T. Bhattacharya & Probir Roy	“Unitarity Limit On The Gaugino-Gravitino Mass Ratio”	Phys. Lett. B. 206 (1988) 655
78.	T. Bhattacharya & Probir Roy	“Role of Chiral Scalar And Pseudoscalar In Two Photon Production of Superlight Gravitino”	Phys. Rev. D38 (1988) 2284

79.	T. Bhattacharya & Probir Roy	“Tree Unitarity In Broken Supergravity I: Single Gravitino Amplitude”	Nucl. Phys. B328 (1989) 469
80.	T. Bhattacharya & Probir Roy	“Tree Unitarity In Broken Supergravity II: Double Gravitino Amplitude”	Nucl. Phys. B328 (1989) 481
81.	Probir Roy	“Collider Signatures of New Physics: a Theorist’s Perspective”	Proc. VIII DAE HEP Symp. 1988 (unpublished)
82.	Probir Roy	“Supergravity Models of Supersymmetry Breaking”	<i>Phenomenology of the Standard Model and Beyond</i> (ed. D.P. Roy and P. Roy), World Scientific, Singapore, 1989
83.	Probir Roy & S. Uma Sankar	“Inclusive Forward-Backward Asymmetry for Light Quarks”	Phys. Rev. D41 (1990) 809
84.	E. Ma & Probir Roy	“Identifying Tau As A Nonleptonic Superparticle”	Phys. Rev. D41 (1990) 988
85.	J. Pantaleone & Probir Roy	“Heavy Quarkonium Decay Into Z + Higgs Boson As A Scalar/Pseudoscalar Discriminant”	Phys. Rev. Lett. 64 (1990) 264
86.	Probir Roy	“Small Phases of Nonminimal Gauge Models”	Phys. Rev. Lett. 64 (1990) 812
87.	D.A. Dicus, D. Karatas & Probir Roy	“Lepton Nonconservation At Supercollider Energies”	Phys. Rev. D44 (1991) 2033
88.	D.A. Dicus & Probir Roy	“Restrictions on Gravitino Mass from Chiral Scalar and Pseudoscalar Production”	Phys. Rev. D42 (1990) 938
89.	D.A. Dicus & Probir Roy	“Supercollider Signatures And Correlations of Heavy Neutrinos”	Phys. Rev. D44 (1991) 1593
90.	S.M. Chitre, P.S. Joshi & Probir Roy	“Gravitino Mass Bounds in a General Cosmological Scenario”	Phys. Lett. A 160 (1991) 36
91.	.G. Bhattacharyya, S. Banerjee & Probir Roy	“Oblique Electroweak Corrections And New Physics”	Phys. Rev. D6 (1992) 729 (R)
92.	F. Halzen, Probir Roy & M.L. Stong	“Two-Loop Versus New Physics Effects On Oblique Parameters”	Phys. Lett. B277 (1992) 503

93.	E. Ma & Probir Roy	“Negative, Anomaly-Free Oblique Parameters”	Phys. Rev. Lett. 68 (1992) 2879
94.	R.M. Godbole, Probir Roy & X. Tata	“Tau Signals of R-parity Breaking at LEP 200”	Nucl. Phys. B401 (1993) 67
95.	D. Choudhury, R.M. Godbole & Probir Roy	“Higgs-mediated Heavy Neutrino Pair-production at pp Supercolliders”	Phys. Lett. B308 (1993) 394
96.	Probir Roy	“Radiative Electroweak Parameters”	Pramana J. Phys. Suppl. 41 (1993) 75.
97.	Probir Roy	“Neutrinos at Accelerator Energies”	<i>Neutrino Physics,</i> 11th Symposium on Theoretical Physics (Mt. Sorak, Korea, ed. J.E. Kim), p76.
98.	Probir Roy	“Electroweak Processes and Precision Tests”	<i>Particle Physics and Cosmology at the Interface</i> (ed. J.C. Pati, P. Ghose (and J. Maharana, World Sientific, 1995)
99.	B. Brahmachari & Probir Roy	“Constraints on Baryon- Nonconserving Couplings in a Supersymmetric Theory”	Phys. Rev. D50 (1994) 39 (R).
100.	Probir Roy	“Scenarios and Signals of Very Heavy Neutrinos”	Proc. Intl. Conf. <i>Nonaccelerator Particle Physics</i> (ed. R. Cowsik, World Scientific, 1995), p 225.
101.	C.E. Carlson, Probir Roy & M. Sher	“New Bounds on R -parity Violating Interactions”	Phys. Lett. B357 (1995) 99.
102.	Ernest Ma & Probir Roy	“Model of Four Neutrinos in the Light of All Present Data”	Phys. Rev. D52 (1995) 4780 (R).
103.	A.S. Joshipura & Probir Roy	“Group Report: Beyond Standard Model”	Pramana J. Phys. Suppl. 45 (1995) 393.
104.	D. Choudhury & Probir Roy	“New Constraints on Lepton Nonconserving R-parity Violating Couplings”	Phys. Lett. B378 (1996) 153.
105.	Anirban Kundu & Probir Roy	“A General Treatment of Oblique Parameters”	Int. J. Mod. Phys. A12 (1997) 1511

106.	Probir Roy	“Seeking Supersymmetry at LEP”	<i>Highlights of Particle Phenomenology</i> (ed. A. Datta et al, Allied Publishers, 1997).
107.	A. Raychaudhuri & Probir Roy	“WHEPP5 Working Group Report: Unification and Model Building, Astroparticle Physics and Neutrinos	<i>Highlights of Particle Phenomenology</i> (ed. A. Datta et al, Allied Publishers, 1997).
108.	Probir Roy	“Theory/Phenomenology Summary”	Ind. J. Phys. 71A , (spl.) (1997) 381
109.	M. Drees, M. Guchait & Probir Roy	“Stringent Bounds on Supersymmetric Higgs Bosons From Existing Tevatron Data”	Phys. Rev. Lett. 80 (1998) 2047, errtm. <i>ibid</i> 81 (1998) 2334
110.	E. Ma & Probir Roy	“New Interactions in Neutrino Oscillations with Three Light Flavours”	Phys. Rev. Lett. 80 (1998) 4637
111.	N. Gaur, A. Ghoshal, E. Ma & Probir Roy	“Radiative neutrino Mass Matrix for Three Active and One Sterile Species”	Phys. Rev. D58 (1998) 071301 (R)
112.	Probir Roy	“Status of Weak-scale Supersymmetry”	Ind. J. Phys. 72A spl. (1998) 479
113.	Probir Roy & K. Sridhar	“A New Proposal for Glueball Exploration in Hard Gluon Fragmentation at LEP”	J. High Energy Phys. 07 (1999) 013
114.	Probir Roy	“Radiative Four neutrino Masses and Mixings”	Proc. 29th Intl. Conf. <i>High Energy Physics</i> (ed. A. Astbury, D. Axen, J. Robinson, World Scientific, 1999), vol. 1, p671.
115.	Probir Roy	“Supersymmetry, R-parity and their Breaking”	Int. J. Mod. Phys. 14 (2000) 2063.
116.	D.K. Ghosh, Probir Roy & S. Roy	“Linear Collider Signal of a Wino LSP in Anomaly-Mediated Scenarios”	J. High Energy Phys. 08 (2000) 031
117.	D.K. Ghosh, A. Kundu, Probir Roy & S. Roy	“Characteristic Wino Signals in a Linear Collider from Anomaly Mediated Supersymmetry Breaking”	Phys. Rev. D64 (2001) 115001
118.	K. Abe et al.	“Particle Physics Experiments at JLC”	KEK-Report-2001-11, hep-ph/0109166.
119	Probir Roy & S. Vempati	“Constraints on Radiative Neutrino Mass Models from Oscillation Data”	Phys. Rev. D65 (2002) 073011.
120	S. Pakvasa & Probir Roy	“Constraining Four Neutrino Mass Patterns from Neutrinoless Double Beta Decay”	Phys. Lett. B535 (2002) 181.

121	Probir Roy	“Mechanisms of Supersymmetry Breaking in the MSSM”	Pramana J. Phys. Suppl. 60 (2003) 169.
122	B. Brahmachari, S. Choubey & Probir Roy	“CP Violation and Matter Effect for Variable Density in Very Long Baseline Experiments”	Nucl. Phys. B671 (2003) 483.
123.	S. Choubey & Probir Roy	“Testing the Maximal Nature of Neutrino Flavour Mixing”	Phys. Rev. Lett. 93 (2004) 021803.
124.	J.L. Hewett, Probir Roy & S. Roy	“Higher Dimensional Models of Light Majorana Neutrinos Confronted by Data”	Phys. Rev. D70 , 051903 (R) (2004).
125.	K. Huitu, J. Laamanen, Probir Roy and S. Roy	“Infrared Fixed Point of the Top Yukawa Coupling in Split Supersymmetry”	hep-ph/0502052