

List of Publications

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Research Papers

1. "Study of CP property of the Higgs at a photon collider using $\gamma\gamma \rightarrow t\bar{t} \rightarrow \ell X$ " with R. M. Godbole and S. D. Rindani, Phys. Rev. **D67**, 095009 (2003), [hep-ph/0211136].
2. "Transverse beam polarization and CP-violating triple-gauge-boson couplings in $e^+e^- \rightarrow \gamma Z$ " with B. Ananthanarayan, S. D. Rindani and A. Bartl, Phys. Lett. **B593**, 95 (2004), [hep-ph/0404106].
3. "Signatures of anomalous Higgs interactions at a linear collider" with S. S. Biswal, D. Choudhury and R. M. Godbole, Phys. Rev. **D73**, 035001 (2006), [hep-ph/0509070].
4. "The Derivative of the topological susceptibility at zero momentum and an estimate of eta' mass in the chiral limit" with J. Pasupathy, J.P. Singh and A. Upadhyay, Phys. Lett. **B634**, 508 (2006), [hep-ph/0509260].
5. "Axial vector current matrix elements and QCD sum rules" with J. Pasupathy, Int. J. Mod. Phys. **A21**, 5099 (2006), [hep-ph/0312304].
6. "Probing CP-violating Higgs contributions in $\gamma\gamma \rightarrow f\bar{f}$ through fermion polarization" with R. M. Godbole, S. Kraml and S. D. Rindani, Phys. Rev. **D74**, 095006 (2006), [hep-ph/0609113].
7. "Lepton distribution as a probe of new physics in production and decay of the t quark and its polarization" with R. M. Godbole and S. D. Rindani, JHEP **0612**, 021 (2006), [hep-ph/0605100].
8. "Top production at the Tevatron/LHC and nonstandard, strongly interacting spin one particles" with D. Choudhury, R. M. Godbole and K. Wagh, Phys. Lett. **B657**, 69, 2007 arXiv:0705.1499 [hep-ph].
9. "Kaluza-Klein excitations of gauge bosons at the LHC" with A. Djouadi and G. Moreau, Nucl. Phys. **B797**, 1, 2008, arXiv:0706.4191 [hep-ph]
10. "A model independent spin analysis of fundamental particles using azimuthal asymmetries," with F. Boudjema, Accepted for publication in JHEP, arXiv:0903.4705 [hep-ph].
11. "The forward-backward asymmetry of top quark production at the Tevatron in warped extra dimensional models," with A. Djouadi, G. Moreau and F. Richard, arXiv:0906.0604 [hep-ph].
12. "Constraining the MSSM with universal gaugino masses and implication for searches at the LHC," with G. Belanger, F. Boudjema and A. Pukhov, arXiv:0906.5048 [hep-ph]
13. "Does PAMELA pbar/p measurements affect the prospects of dark matter indirect detection at LHC?," with C. Boehm, T. Delahaye, P. Salati and F. Staub, arXiv:0907.4511 [hep-ph].

General Articles

1. "Asymmetries in nature : Discrete symmetries in particle physics and their violation - I" with B. Ananthanarayan, J. Meeraa, B. Sharma and S. Sharma, Resonance J. Sci. Educ. **7N3**, 10 (2002) and physics/0201043.
2. "Asymmetries in nature : Discrete symmetries in particle physics and their violation - II" with B. Ananthanarayan, J. Meeraa, B. Sharma and S. Sharma, Resonance J. Sci. Educ. **7N6**, 45 (2002) and physics/0201044.
3. "Research News : Direct observation of neutrino oscillations at the Sudbury Neutrino Observatory" with B. Ananthanarayan, Curr. Sci. **83**, 553 (2002), Resonance J. Sci. Educ. **7N10**, 79 (2002) and physics/0208096.

Working Group Reports/Proceedings

1. "Summary of the activities of the Working Group I on High Energy and Collider Physics", Naba K. Mondal *et al.*. Oct 2004. 34pp. Presented at 8th Workshop on High-Energy Physics Phenomenology (WHEPP 8), Bombay, India, 5-16 Jan 2004. Pramana **63**:1331-1354,2004 and hep-ph/0410340.
2. "The role of polarized positrons and electrons in revealing fundamental interaction at the linear collider", G. Moortgat-Pick *et al.*. SLAC-PUB-11087, CERN-PH-TH-2005-036, Jul 2005, 149pp, hep-ph/0507011.
3. "Les Houches physics at TeV colliders 2005 beyond the standard model working group: Summary report", B. C. Allanach *et al.*, FERMILAB-CONF-06-338-T, SLAC-PUB-11770, Feb 2006, 269pp, hep-ph/0602198.
4. "Workshop on CP Studies and Non-Standard Higgs Physics", E. Accomando *et al.*, CERN-2006-009, Jul 2006. 542pp, hep-ph/0608079.
5. "International Linear Collider Reference Design Report Volume 2: PHYSICS AT THE ILC", G. Aarons *et al.* [ILC Collaboration], arXiv:0709.1893 [hep-ph].
6. "ILC Reference Design Report: ILC Global Design Effort and World Wide Study", By ILC Collaboration (James Brau, (Ed.) *et al.*). Aug 2007. 147pp. arXiv:0712.1950.
7. "ILC Reference Design Report Volume 4 - Detectors", By ILC Collaboration (Ties Behnke, (Ed.) *et al.*). Dec 2007. arXiv:0712.2356
8. "New Physics at the LHC: A Les Houches Report. Physics at TeV Colliders 2007 – New Physics Working Group", G. Brooijmans *et al.* Feb 2008. 127pp. arXiv:0802.3715
9. "Probing CP-violating Higgs contributions in $\gamma\gamma \rightarrow f\bar{f}$ ", Rohini M. Godbole, Sabine Kraml, Saurabh D. Rindani, Ritesh K. Singh, Prepared for LCWS06, Bangalore, India, 9-13 Mar 2006, Published in Pramana **69**, 771, 2007
10. "Anomalous $V V H$ interactions at a linear collider", Sudhansu S. Biswal, Debajyoti Choudhury, Rohini M. Godbole, Ritesh K. Singh Prepared for LCWS06, Bangalore, India, 9-13 Mar 2006, Published in Pramana **69**, 777, 2007
11. "Lepton distribution in top decay: A probe of new physics and top-polarization", Rohini M. Godbole, Saurabh D. Rindani, Ritesh K. Singh Prepared for LCWS06, Bangalore, India, 9-13 Mar 2006, Published in Pramana **69**, 915, 2007

Manuscripts in preparation

1. "Polarization measurement of top quark at hadronic collider" with F. Boudjema and W. Porod.

Work in Progress

1. *"Measuring spin of gluino at hadronic collider"*
with L. Edelhaeuser, T. Ohl and W. Porod.
2. *"Collider signature of b' production and decay in the RS1 model"*
with A. Djouadi and G. Moreau S. Gopalakrishna.
3. *"Charge asymmetry of top-quark at Tevatron in RS1 model"*
with A. Djouadi, G. Moreau and F. Richard.
4. *"Anomalous couplings of top quark and implications for single top production"*
with E. Boos, V. Bunichev and M. Kiryushin
5. *"CPV-MSSM parameter scan using MCMC and implications for very light Higgs boson"*
with G. Belanger, F. Boudjema, S. Fichet, S. Kraml and A. Pukhov

Internal report

1. *"Coulomb Scattering in the de-Broglie-Bohm Picture"* with J. Pasupathy, TR-PME-2002-13, Technical report for DRDO-IISc programme on Advanced Research in Mathematical Engineering.