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Name: Gulsheen Ahuja

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Educational background

- M.Sc. (Hons. School) Physics, Panjab University, Chandigarh (1999)
- Ph.D. (Science), Panjab University, Chandigarh (January 2008)

Professional background

- Principal Investigator in DST SERC Fast Track Young Scientist project from March 2009 to March 2012.
- Principal Investigator in DST SERB Fast Track Young Scientist project from July 2012 to July 2014.
- Assistant Professor, Panjab University, Chandigarh (2014 onwards)

Main area of work

High Energy Physics (Phenomenology): Flavor Physics

List of publications

- 1.** Implications of general lepton mass matrices in the standard model on m_{ee}
Samandeep Sharma, Gulsheen Ahuja, Manmohan Gupta.
Phys.Rev. D94 (2016) no.11, 113004.
- 2.** Constraining the texture mass matrices
Gulsheen Ahuja.
Int.J.Mod.Phys. A31 (2016) no.18, 1630024.
- 3.** General lepton textures and their implications
Gulsheen Ahuja, Samandeep Sharma, Priyanka Fakay, Manmohan Gupta.
arXiv:1604.03339 [hep-ph].
Mod.Phys.Lett. A30 (2015) no.34, 1530025.
- 4.** Fermion mass matrices, textures and beyond
Manmohan Gupta, Priyanka Fakay, Samandeep Sharma, Gulsheen Ahuja.
arXiv:1604.03335 [hep-ph].
Mod.Phys.Lett. A30 (2015) 1530024.
- 5.** Revisiting the texture zero neutrino mass matrices
Madan Singh, Gulsheen Ahuja, Manmohan Gupta.
arXiv:1603.08083 [hep-ph].
PTEP 2016 (2016) no.12, 123B08.
- 6.** Minimal Set of Texture Specific Quark Mass Matrices
Samandeep Sharma, Gulsheen Ahuja.
arXiv:1507.03845 [hep-ph].
Springer Proc.Phys. 174 (2016) 215-220.
- 7.** Constraining the lightest neutrino mass and m_{ee} from general lepton mass matrices
Samandeep Sharma, Gulsheen Ahuja, Manmohan Gupta.
Pramana 86 (2016) no.2, 419-424.
- 8.** Finding a unique texture for quark mass matrices
Samandeep Sharma, Priyanka Fakay, Gulsheen Ahuja, Manmohan Gupta.

arXiv:1503.03963 [hep-ph].
Phys.Rev. D91 (2015) 053004.

9. Comment on “Texture zeros and weak basis transformations in the quark sector of the standard model”

Samandeep Sharma, Priyanka Fakay, Gulsheen Ahuja, Manmohan Gupta.
arXiv:1503.01227 [hep-ph].
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10. Clues towards unified textures

Samandeep Sharma, Priyanka Fakay, Gulsheen Ahuja, Manmohan Gupta.
arXiv:1404.5726 [hep-ph].
Int.J.Mod.Phys. A29 (2014) 1444005.

11. Majorana neutrinos and non minimal lepton mass textures

Samandeep Sharma, Priyanka Fakay, Gulsheen Ahuja, Manmohan Gupta.
arXiv:1402.1598 [hep-ph].

12. Implications of non minimal lepton mass textures for Dirac neutrinos

Samandeep Sharma, Priyanka Fakay, Gulsheen Ahuja, Manmohan Gupta.
arXiv:1402.0628 [hep-ph].

13. Leptonic mixing angle θ_{13} and ruling out of minimal texture for Dirac neutrinos

Priyanka Fakay, Samandeep Sharma, Gulsheen Ahuja, Manmohan Gupta.
arXiv:1401.8121 [hep-ph].
PTEP 2014 (2014) no.2, 023B03.

14. Flavor mixings and textures of the fermion mass matrices

Manmohan Gupta, Gulsheen Ahuja.
arXiv:1302.4823 [hep-ph].
Int.J.Mod.Phys. A27 (2012) 1230033.

15. Implications of θ_{13} on Fritzsche-like lepton mass matrices

Priyanka Fakay, Samandeep Sharma, Rohit Verma, Gulsheen Ahuja, Manmohan Gupta.
arXiv:1301.5970 [hep-ph].
Phys.Lett. B720 (2013) 366-372.

- 16.** Revisiting the possibility of new physics in the K- anti-K and B(d)- anti-B(d) systems
Gulsheen Ahuja, Rohit Verma, Priyanka Fakay, P.S. Gill, Manmohan Gupta.
Mod.Phys.Lett. A27 (2012) 1250125.
- 17.** Exploring the likelihood of CP violation in neutrino oscillations
Gulsheen Ahuja.
arXiv:1206.0352 [hep-ph].
Mod.Phys.Lett. A26 (2011) 2597-2603.
- 18.** Spin and flavor content of nucleon in the chiral quark model
Manmohan Gupta, Gulsheen Ahuja, Harleen Dahiya, J.M.S. Rana.
Conference: C10-02-24, p.518-525 Proceedings
- 19.** Possible textures of the fermion mass matrices
Manmohan Gupta, Gulsheen Ahuja.
arXiv:1206.3844 [hep-ph].
Int.J.Mod.Phys. A26 (2011) 2973-2995.
- 20.** Exploring the Parameter Space of Texture 4 Zero Quark Mass Matrices
Rohit Verma, Gulsheen Ahuja, Neelu Mahajan, Manmohan Gupta, Monika Randhawa.
arXiv:1004.5452 [hep-ph].
J.Phys. G37 (2010) 075020.
- 21.** Implications of precision measurements on texture specific fermion mass matrices
Manmohan Gupta, Gulsheen Ahuja, Rohit Verma.
arXiv:0911.0742 [hep-ph].
Int.J.Mod.Phys. A24S1 (2009) 3462-3468.
- 22.** Implications of CP asymmetry parameter $\sin 2\beta$ on structural features of texture specific mass matrices
Rohit Verma, Gulsheen Ahuja, Manmohan Gupta.
arXiv:0909.4363 [hep-ph].
Phys.Lett. B681 (2009) 330-335.
- 23.** Texture specific mass matrices with Dirac neutrinos and their implications
Gulsheen Ahuja, Manmohan Gupta, Monika Randhawa, Rohit Verma.

arXiv:0904.4534 [hep-ph].
Phys.Rev. D79 (2009) 093006.

24. Texture 4 zero Fritzsche-like lepton mass matrices

Gulsheen Ahuja, Sanjeev Kumar, Monika Randhawa, Manmohan Gupta, S. Dev.
hep-ph/0703005 [HEP-PH].
Phys.Rev. D76 (2007) 013006.

25. Constructing the Leptonic Unitarity Triangle

Gulsheen Ahuja, Manmohan Gupta.
hep-ph/0702129 [HEP-PH].
Phys.Rev. D77 (2008) 057301.

26. Constructing the CKM and PMNS matrices from mixing data

Gulsheen Ahuja, Manmohan Gupta, Monika Randhawa.
hep-ph/0611324.

27. Implications of unitarity and precision measurements on CKM matrix elements

Gulsheen Ahuja, Manmohan Gupta, Sanjeev Kumar, Monika Randhawa.
hep-ph/0608074.
Phys.Lett. B647 (2007) 394-399.

28. Implications of Fritzsche-like lepton mass matrices

Monika Randhawa, Gulsheen Ahuja, Manmohan Gupta.
hep-ph/0607074.
Phys.Lett. B643 (2006) 175-181.

29. Oscillating neutrinos: A window to new physics

Manmohan Gupta, Monika Randhawa, Gulsheen Ahuja.
In *Gupta, Raj K. (ed.): Physics of particles, nuclei and materials* 54-74.

30. Implications of texture 4 zero lepton mass matrices for $U(e_3)$

Monika Randhawa, Gulsheen Ahuja, Manmohan Gupta.
hep-ph/0203109.
Phys.Rev. D65 (2002) 093016.

31. Implications of texture specific mass matrices for fermion mixing phenomena

M. Gupta, M. Randhawa, G. Ahuja.

Conference: C01-05-31, p.434-449 Proceedings

32. Three flavor neutrino oscillations, LSND, SNA and ANA

Gulsheen Ahuja, Monika Randhawa, Manmohan Gupta.

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