

RESEARCH PUBLICATIONS IN REFEREED JOURNALS

Theoretical High Energy Physics

1. “Connections between Yang-Mills Configuration in Minkowski and Euclidean Spaces”; M.Gupta and A.Sharma; Physical Review D 22:3085 (1980).
2. “Masses of Charmed and b-quark Hadrons in Quasi-nuclear Colored Quark model”; C. P. Singh, A. Sharma & M. P. Khanna, Pramana, 16, 487-492 (1981).
3. “Electromagnetic mass differences of b Quark Hadrons in non-relativistic Gauge theory model.” C.P. Singh, A. Sharma & M.P. Khanna, Physical Review D24, 788-790 (1981).
4. “Weak Radiative of Hyperons and Charmed Baryons in a Quark Model”, P.K. Chatley and A. Sharma, Physical review D25, 2351 (1982).
5. “Baryon Magnetic Moments in a Quark Model” A. Sharma & S. Kanwar, Pramana, 16, 73 (1981).
6. “Spin–interaction Affected Interquark distances: Effect on $V \rightarrow P\gamma$ Decays”; A. Sharma, Lettere Nuovo Cimento 33: 445-448 (1982)
7. “A Hadrons Mass formula”, C. P. Singh & A. Sharma, Physical Review D 26, 2514-16, (1982)
8. “Bag inspired Gluonic and Relativistic effects in Harmonic Oscillator Model”. A. Sharma, M. Gupta and M.P. Khanna; Physical Review D 27:2182 (1983)
9. “Nonleptonic Decay Matrix Elements in the Bag inspired Harmonic Oscillator Model”; A. Sharma, M. Gupta and M. P. Khanna; Physical Review D 29: 159-161 (1984)
10. “Compatibility of $G(A) / G(V)$, $R(P)$ and $\mu(P)$ in the Quark Models”; A. Sharma, M. P. Khanna, M. Gupta; J.Phys. G10:L241, 1984
11. “W-exchange dominance and the $\Sigma^+ \rightarrow P\gamma$ Asymmetry;” R.C. Verma, A. Sharma, Jol. of .Physics G12:1329, (1986)
12. “A reanalysis of Weak Radiative decays of Hyperion”; R.C. Verma & A. Sharma, Physical Review D 38,1443 (1988)

13. “*The Exact String Potential and Quarkonia*”; B. Bambah, K. Dharamvir, R. Kaur & A. Sharma, Physical Review D45, 1769 (1992); Erratum *ibid*, D52, 314 (1995)
14. “*Can a Gaussian type Quark-Antiquark potential work for Quarks?*” S. Kamboj & A. Sharma, Ind. J. Pure & App. Phys.32, 368-370 (1994).
15. “*Energy level inequality in the ‘Wrinkled’ Quarkonium potential;*” B. Bambah, K. Dharamvir, A. Sharma, Physical Review D 53, 4106 (1996).
16. “*An incompatibility in calculation of quarkonium mass and leptonic decay widths in potential models*”; A. Sharma, R.C. Verma & M.P. Khanna; Indian Jol. of Pure & Applied Physics 36, 259 (1998).
17. “*A Quark-Antiquark Potential extracted from Quarkonium Spectroscopic data*”; K.K. Sharma, R.C. Verma & A. Sharma, Indian Jol. of Pure and Applied Physics 37, 75-86 (1999)
18. “*Quark diagram analysis of $B \rightarrow VV$ Weak decays including Smearing effects*”; R.C. Verma & A. Sharma, Physical Review D 64, 114018 (2001)
19. “*Quark diagram analysis of weak hadronic decays of $B/c + meson$* ”; R.C. Verma & A. Sharma, Physical Review D 65, 114007 (2002)
20. “*Effects of Flavor dependence on Weak decays of J/ψ and Upsilon*”, Rohit Dhir, R.C. Verma and A. Sharma, ‘Advances of High Energy Physics’ Vol. 2013, Id 706543 (2014)
21. “*Topological Analysis of Bottom meson decays emitting two Pseudoscalar Mesons* ” Maninder Kaur, Rohit Dhir, A. Sharma, R.C. Verma, ‘Physics of Particles and Nuclei Letters’ , Vol 12, No.2, 230-237 (2015)
22. “*Charmless p-wave Mesons Emitting Decays of Bottom Mesons*”, Neelash & A.Sharma, Submitted to Phys. Rev. D (Jan 2018)
23. “*Weak decays of Charmed Baryons revisited*”, Nitika Sharma, PK Chatley, Harleen Dahiya & A. Sharma, In preparation (2017-18).
24. “*Isospectral Potentials and Quarkonia*”, Nitika Sharma, PK Chatley & **A. Sharma**, In preparation (2017-18).

Other Research Areas

1. “*Growth of the Lithium Floride Crystals by Edge Defined Film Fed Growth (EFG) Technique*”, Pooja Vadhan, Shruti Aggarwal, **A.C. Sharma**, SM Rao & RC Verma; Ind. J. Pure & Applied Phys. Vol48, pp394-397 (2010)

2. “*Performance Analysis of Fingerprint based Image Enhancement and Minutiae Extraction*”, R Jain, BVR Reddy & AC Sharma, IPU_2011 (Unpublished)
3. “*Growth and investigation of multicrystalline silicon sheets by capillary action shaping technique for its potential application in solar cells*”, Leena Garg, P.Kaur, S.Sharma, P.Seth, SK Pandey, S. Aggarwal, S. Kumar, A. Thakur, **Avinash Sharma**, RC Verma, SM Raro, Submitted to Jol. of Mat. Sc. & Tech. (2013)
4. “*Theoretical Simulation of the thermal profile in the Capillary Action Shaping Technique and its verification by the growth of Silicon sheets*”, Leena Garg, SMD Rao, RC Verma & **AC Sharma**, Submitted for publication (2017).
5. “*Radon exhalation in some building construction materials and effect of plastering and paints on the radon exhalation rate using fired bricks*”, A. Sharma et al, Advances in Applied Science Research”, 5(2), 382-386 (2014).
6. “*Study of radon, thoron concentration and annual effective dose in some dwellings of Aligarh city Uttar Pradesh and Dwarka Delhi, India*”, A. Sharma et al, Int. J. of Current Research and Academic Review, Vol.2, No.9, 234-241 (2014)
7. “*Measurements of Radon Exhalation rate from Fly ash samples collected from Kolaghat Thermal Power Plant West Bengal, India*”, A.Sharma, et. al, Int. J. of Current Research, Vol 7, No.1, 11430-11433, Jan. (2015).
8. “*Measurement of indoor Radon, Thoron in dwelling of Delhi, India using double dosimeter cups with SSNTDs*”, Anil Sharma, S. Asad Ali, R G. Sonkawade and **A. C. Sharma**, Journal of Physics Procedia, Elsevier, 80 (2015) 125-127.
9. “*Measurement of natural radioactivity, radon exhalation rate and radiation hazard assessment in Indian cement samples*”, Anil Sharma, Manjulata Yadav, R G. Sonkawade, **A.C. Sharma**, R. C. Ramola and Rajendra Prasad, Journal of Physics Procedia , Elsevier, 80 (2015) 135-139.
10. “*Measurement of Radon exhalation Rate in Sand samples from Gopalpur and Rushikulya beach Orissa, Eastern India*” Ajay Kumar Mahur , Anil Sharma, R G. Sonkawade , D Sengupta, **A. C. Sharma** and Rajendra Prasad, J.of Phys. Procedia (2015) Elsevier, 80 (2015) 140-143.
11. “*Natural radioactivity and radiological hazard assessment of coal samples collected from Kasimpur Thermal Power Plant, Kasimpur (U.P), India*”, Anil Sharma, R.G. Sonkawade and A.C. Sharma, International Journal of Low Radiation (In Press-2016)
12. “*Monitoring of indoor radon, thoron levels and annual effective dose in some dwelling of Jaipur, Rajasthan, India using double dosimeter cups*” Anil Sharma, Ajay Kumar Mahur,

- S. Asad Ali, R G. Sonkawade, **A. C. Sharma**, Archives of Applied Sc. Res., 2015, 7 (2):1-4.
13. “*Measurement of Radon exhalation rate, Natural Radioactivity and Radiation Hazards Assessment in Soil Samples from the Surrounding Area of Kasimpur Thermal Power Plant Kasimpur*” Anil Sharma, Ajay Kumar Mahur, R G. Sonkawade, **A. C. Sharma** and R Prasad, Int. J. of Environmental and Ecological Engg. Vol.2, No.4, 2015.
14. “*A New Model for Organizational Governance and Reachouts with enhanced efficiency, transparency & Accountability for Institutions of higher learning*”, A. Sharma (2017).

Collaboration Reports/ Technical Reports/ DRPs, etc. :

- “*Hardonic Structures and QCD: A collaboration report*”, Nihon Univ. Preprint no. NUP-B-97/01 Feb. 1997, (Japan).
- “*Atmospheric Neutrinos at LVD*”, LVD Collaboration, LNF-INFN, Frascati (Italy) 1990.
- “*Proposal for Establishment of a NanoTechnology Hub within DMIC Framework*”, Submitted to ‘Delhi-Mumbai Industrial Corridor Development Corporation, Ministry of Commerce, GOI, New Delhi (2014-16)

Books Under Preparations :

- “*Relic Neutrinos and its detection*”, Sonali Mohan & A. Sharma (2017-)
- “*E-Governance in Institutions of Higher learning*”, (2018-)
- *VISION & MISSION: Demystified* (2017-19)

* * * * *

A tentative List of Invited Talks / Keynotes address/etc.

1. Invited Talk, “Recent developments in QQ/bar potentials”, Nihon U., Tokyo, Japan, 5 February 1997.
2. TPSC talk, “Recent developments in QQ/bar potentials”, Department of Physics, University of Hyderabad, Hyderabad, December 1997.
3. Invited Talk “Connection between vary small and very Big: Relic Neutrinos”, Resource Person, UGC refresher Course for Univ. & College Teachers in Physics”, Academic Staff College, Punjab U. Chandigarh, 1997.
4. Invited Talk “Quantum Computers”, UGC Refresher Course for Univ. & College Teachers in Physics, Resource Person, Academic Staff College, Department of Physics, U. of Rajasthan, Jaipur, 2000.
5. Invited Talk “Quantum Computations”, UGC Refresher Course for Univ. & College Teachers in Physics, Resource Person, Academic Staff College, Department of Physics, Himachal Pradesh U. Shimla, 2002.
6. Invited Talk “Recent developments in QQ/bar potentials”, Theoretical Physics Division, JINR, Dubna, Russia, 2004.
7. Invited Talk “Quantum Computations”, UGC Refresher Course for Univ. & College Teachers in Physics, Resource Person, Academic Staff College, Physics Department, February 25-26, 2005.
8. Invited Talk, “Quantum Computations”, Department of Physics, Panjabi U. Patiala, 26 December, 2006.
9. Invited Talk “NanoTechnology R&D in India: Status & Opportunity areas of Collaborations”, Organized by FICCI under Italy-India: Forum for the Opportunities of co-operation, 17-18 April 2008.
10. Invited Talk, “Quantum Computations”, UGC Refresher Course for Univ. & College Teachers in Physics”, Resource Person, Faculty of Science & Academic Staff College, Kurukshetra U., Kurukshetra, 27 June 2008.
11. Invited Talk, “Recent Trends in Computing: Grid Computing”, Presidential Address, National Workshop on Computers in Physics, Department of Physics, Panjabi U. Patiala, 19 January, 2009.
12. Invited Talk “Monte Carlo Techniques”, Visitors Program, Department of Physics, Punjab U. Chandigarh, 31 March, 2009.

13. Invited Talk, “Connection between vary small and very Big: Relic Neutrinos”, UGC Refresher Course for Univ. & College Teachers in Physics”, Resource Person, Academic Staff College, Delhi U. Delhi, 5 January, 2011.
14. Invited Talk “Quantum Computations”, Department of Physics, Punjab U. Chandigarh, 15 February 2011.
15. Guest of Honor, Keynote Adress, 2nd National Seminar on Trends in Condense Matter Physics including Laser applications”, Department of Physics, Burdwan U., Burdwan, 6 March 2012.
16. Invited Talk “Prospects of M.Sc. Physics Students”, Talk-cum-Interactive Session, Department of Physics, Panjabi U. Patiala 6 January 2013.
17. Guest of Honor, Keynote Adress, 2nd National Seminar on Trends in Condense Matter Physics including Laser applications”, Department of Physics, Burdwan U., Burdwan, 5 March 2013
18. Invited talk, 4th Annual International Conference on Physics, Athens Institute of Education & Research, Athens (Greece), July 18-21, 2016.
19. Session Chairman, 4th Annual International Conference on Physics, Athens Institute of Education & Research, Athens (Greece), July 18-21, 2016.
20. ‘Round Table Meeting on ‘Teaching & researching in Basic Sciences in Global World’, Athens Institute of Education & Research, Athens (Greece), July 19, 2016.
21. “Invited Talk on ‘Quantum Computations’, MS Institute of Technology, New Delhi, March 18, 2017.
22. “Invited Talk on ‘*Engineering Physics: Bridging Basic Sciences Based Research and the Technology Development & its Adaptation*’, at the WSEE International Conference, Northeastern University,, Columbus, Ohio (USA), 25-28, June 2017.
23. “Chairman, Inaugural Session”, *International Conf. on Material Research*, Faridabad, July 10, 2017

* * * * *