

CURRICULUM VITAE

Personal Profile

Name: Rajarshi Ray
Born / Sex: October 24, 1973 / Male
Marital / Nationality: Married / Indian
Present Position: Associate Professor
Contact Address: Department of Physics and
Center for Astroparticle Physics & Space Science,
Bose Institute
EN-80, Sector 5, Bidhan Nagar
Kolkata 700091, India
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Academic Profile

Areas of Research: Phase Transition, Quark Gluon Plasma, Topological Defects,
Lattice field theory, Stochastic Process, Bio-molecular interactions.

Research Positions:

Oct. 2012 Present: Associate Professor
Bose Institute, Kolkata, India.
Oct. 2008 Oct. 2012: Assistant Professor
Bose Institute, Kolkata, India.
Jan. 2008 Oct. 2008: Visiting Fellow (Post-doctoral)
National Center for Biotechnology Information, Bethesda, USA.
Apr. 2005 Dec. 2007: Research Associate-II
Saha Institute of Nuclear Physics, Kolkata, India.
Jan. 2003 Mar. 2005: Visiting Fellow (Post-doctoral)
Tata Institute of Fundamental Research, Mumbai, India.
Aug. 1998 Dec. 2002: Senior Research Fellow
Institute of Physics, Bhubaneswar, India.
Aug. 1996 Jul. 1998: Junior Research Fellow
Institute of Physics, Bhubaneswar, India.

Academic Records:

2003	Ph.D., in Physics (Advisor: Prof. Ajit M. Srivastava) Institute of Physics, Bhubaneswar, India.
1997	Post. M.Sc. Diploma in Advanced Physics Institute of Physics, Bhubaneswar, India.
1996	M.Sc., in Physics Science College, Rajabazar (University of Calcutta), India.
1994	B.Sc. (Honours), in Physics Asutosh College (University of Calcutta), India.

Other Awards:

1996	Qualified for Graduate Aptitude Test in Engineering (GATE 1996) in Physical Sciences.
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Academic Activities:

Research:

Involved in full time research program at Bose Institute.

Total Publications: 68

A: Publications in peer-reviewed journals: 32

B: Other Research Articles: 4

C: Books/Edited volumes/Reports: 2

D: PhD Thesis: 1

E: Conference proceedings: 29

Involved as co-investigator / collaborator in various extramural research projects.

Human Resource Development / Outreach:

Involved in training several doctoral scholars. Formally supervising thesis work of five doctoral scholars.

Involved as coordinator as well as teacher in the integrated MSc-PhD (Physical Sciences) program of Bose Institute in collaboration with University of Calcutta.

Involved in organization and participation in various seminar, conference and outreach programs of Bose Institute especially in the North-East Student's Summer Training on Basic Science (NESST-BASE) school and in the Winter School and Conference on Astroparticle physics.

The information herein is true to the best of my knowledge.

Date: 16/03/2017

Rajarshi Ray

List of Publications of Rajarshi Ray:

A. Peer Reviewed Journals:

- A.1. **Reparametrizing the Polyakov – Nambu – Jona-Lasinio model**
Abhijit Bhattacharyya, Sanjay K. Ghosh, Soumitra Maity, Sibaji Raha, Rajarshi Ray, Kinkar Saha and Sudipa Upadhaya
Published in Phys.Rev. D95 (2017) no.5, 054005(1-13)
DOI: 10.1103/PhysRevD.95.054005
e-Print: arXiv:1609.07882 [hep-ph]
Cited by 0 (Inspires/arXiv) / 0 (Journal) / 0 (Google scholar) records
- A.2. **Polyakov–Nambu–Jona-Lasinio Model In Finite Volumes**
Abhijit Bhattacharyya, Sanjay K. Ghosh, Rajarshi Ray, Kinkar Saha and Sudipa Upadhaya
Published in Europhys.Lett. 116 (2016) no.5, 52001(p1-p7)
DOI: 10.1209/0295-5075/116/52001
e-Print: arXiv:1507.08795 [hep-ph]
Cited by 3 (Inspires/arXiv) / - (Journal) / 2 (Google scholar) records
- A.3. **Exploring Effects Of Magnetic Field On The Hadron Resonance Gas**
Abhijit Bhattacharyya, Sanjay K. Ghosh, Rajarshi Ray and Subhasis Samanta
Published in Europhys.Lett. 115 (2016) no.6, 62003(p1-p6)
DOI: 10.1209/0295-5075/115/62003
e-Print: arXiv:1504.04533 [hep-ph]
Cited by 3 (Inspires/arXiv) / - (Journal) / 1 (Google scholar) records
- A.4. **Thermodynamics And Fluctuations Of Conserved Charges In A Hadron Resonance Gas Model In A Finite Volume**
Abhijit Bhattacharyya, Rajarshi Ray, Subhasis Samanta and Subrata Sur
Published in Phys.Rev. C91 (2015) no.4, 041901(1-6) (Rapid Communication)
DOI: 10.1103/PhysRevC.91.041901
e-Print: arXiv:1502.00889 [hep-ph]
Cited by 16 (Inspires/arXiv) / 2 (Journal) / 13 (Google scholar) records
- A.5. **Fluctuation Of Strongly Interacting Matter In The Polyakov – Nambu – Jona-Lasinio Model In A Finite Volume**
Abhijit Bhattacharyya, Rajarshi Ray and Subrata Sur
Published in Phys.Rev. D91 (2015) no.5, 051501(1-6) (Rapid Communication)
DOI: 10.1103/PhysRevD.91.051501
e-Print: arXiv:1412.8316 [hep-ph]
Cited by 10 (Inspires/arXiv) / 1 (Journal) / 10 (Google scholar) records
- A.6. **Shear Viscosity And Phase Diagram From Polyakov – Nambu – Jona-Lasinio Model**
Sanjay K. Ghosh, Sibaji Raha, Rajarshi Ray, Kinkar Saha and Sudipa Upadhaya
Published in Phys.Rev. D91 (2015) no.5, 054005(1-11)
DOI: 10.1103/PhysRevD.91.054005
e-Print: arXiv:1411.2765 [hep-ph]
Cited by 9 (Inspires/arXiv) / 4 (Journal) / 9 (Google scholar) records

- A.7. **Quark Number Susceptibility : Revisited With Fluctuation-Dissipation Theorem In Mean Field Theories**
 Sanjay K. Ghosh, Anirban Lahiri, Sarbani Majumder, Munshi G. Mustafa Sibaji Raha and Rajarshi Ray
 Published in Phys.Rev. D90 (2014) no.5, 054030(1-18)
 DOI: 10.1103/PhysRevD.90.054030
 e-Print: arXiv:1407.7203 [hep-ph]
 Cited by 8 (Inspires/arXiv) / 2 (Journal) / 9 (Google scholar) records
- A.8. **Fluctuations And Correlations Of Conserved Charges In An Excluded Volume Hadron Resonance Gas Model**
 Abhijit Bhattacharyya, Supriya Das, Sanjay K. Ghosh, Rajarshi Ray and Subhasis Samanta
 Published in Phys.Rev. C90 (2014) no.3, 034909(1-15)
 DOI: 10.1103/PhysRevC.90.034909
 e-Print: arXiv:1310.2793 [hep-ph]
 Cited by 13 (Inspires/arXiv) / 2 (Journal) / 12 (Google scholar) records
- A.9. **Isospin Symmetry Breaking And Baryon-Isospin Correlations From Polyakov – Nambu – Jona-Lasinio Model**
 Abhijit Bhattacharyya, Sanjay K. Ghosh, Anirban Lahiri, Sarbani Majumder, Sibaji Raha and Rajarshi Ray
 Published in Phys.Rev. C89 (2014) no.6, 064905(1-7)
 DOI: 10.1103/PhysRevC.89.064905
 e-Print: arXiv:1212.6134 [hep-ph]
 Cited by 7 (Inspires/arXiv) / 2 (Journal) / 8 (Google scholar) records
- A.10. **The Consequences Of SU(3) Colorsingletness, Polyakov Loop And Z(3) Symmetry On A QuarkGluon Gas**
 Chowdhury Aminul Islam, Raktim Abir, Munshi G. Mustafa, Sanjay K. Ghosh and Rajarshi Ray
 Published in J.Phys. G41 (2014) 025001(1-18)
 DOI: 10.1088/0954-3899/41/2/025001
 e-Print: arXiv:1208.3146 [hep-ph]
 Cited by 8 (Inspires/arXiv) / 3 (Journal) / 8 (Google scholar) records
- A.11. **Duality Between The Dynamics Of Line-like Brushes Of Point Defects In 2D And Strings In 3D In Liquid Crystals**
 Sanatan Digoal, Rajarshi Ray, P.S. Saumia and Ajit M. Srivastava
 Published in J. Phys.: Condensed Matter 25 (2013) 404204(1-6)
 DOI: 10.1088/0953-8984/25/40/404204
 Cited by - (Inspires/arXiv) / - (Journal) / 1 (Google scholar) records
- A.12. **Shear Viscosity Due To Landau Damping From The Quark-Pion Interaction**
 Sabyasachi Ghosh, Anirban Lahiri, Sarbani Majumder, Rajarshi Ray and Sanjay K. Ghosh
 Published in Phys.Rev. C88 (2013) no.6, 068201(1-5)
 DOI: 10.1103/PhysRevC.88.068201
 e-Print: arXiv:1311.4070 [nucl-th]
 Cited by 16 (Inspires/arXiv) / 9 (Journal) / 14 (Google scholar) records

- A.13. **Thermodynamic Properties Of Strongly Interacting Matter In Finite Volume Using Polyakov – Nambu – Jona-Lasinio Model**
Abhijit Bhattacharyya, Paramita Deb, Sanjay K. Ghosh, Rajarshi Ray and Subrata Sur
Published in Phys.Rev. D87 (2013) no.5, 054009(1-13)
DOI: 10.1103/PhysRevD.87.054009
e-Print: arXiv:1212.5893 [hep-ph]
Cited by 18 (Inspires/arXiv) / 9 (Journal) / 23 (Google scholar) records
- A.14. **Study Of Beta Equilibrated 2+1 Flavor Quark Matter In the Polyakov – Nambu – Jona-Lasinio Model**
Abhijit Bhattacharyya, Sanjay K. Ghosh, Sarbani Majumder and Rajarshi Ray
Published in Phys.Rev. D86 (2012) 096006(1-11)
DOI: 10.1103/PhysRevD.86.096006
e-Print: arXiv:1107.5941 [hep-ph]
Cited by 11 (Inspires/arXiv) / 4 (Journal) / 13 (Google scholar) records
- A.15. **Heavy Lepton Pair Production In Nucleus-Nucleus Collisions At LHC Energy – A Case Study**
Jan-e Alam, Bedangadas Mohanty, Sanjay K. Ghosh, Sarbani Majumder and Rajarshi Ray
Published in Nucl.Phys. A889 (2012) 1-7
DOI: 10.1016/j.nuclphysa.2012.05.004
e-Print: arXiv:1102.1855 [nucl-th]
Cited by 1 (Inspires/arXiv) / 0 (Journal) / 1 (Google scholar) records
- A.16. **Correlation Between Conserved Charges In Polyakov – Nambu – Jona-Lasinio Model With Multiquark Interactions**
Abhijit Bhattacharyya, Paramita Deb, Anirban Lahiri and Rajarshi Ray
Published in Phys.Rev. D83 (2011) 014011(1-9)
DOI: 10.1103/PhysRevD.83.014011
e-Print: arXiv:1010.2394 [hep-ph]
Cited by 32 (Inspires/arXiv) / 12 (Journal) / 32 (Google scholar) records
- A.17. **Susceptibilities With Multi-Quark Interactions In the Polyakov – Nambu – Jona-Lasinio Model**
Abhijit Bhattacharyya, Paramita Deb, Anirban Lahiri and Rajarshi Ray
Published in Phys.Rev. D82 (2010) 114028(1-11)
DOI: 10.1103/PhysRevD.82.114028
e-Print: arXiv:1008.0768 [hep-ph]
Cited by 35 (Inspires/arXiv) / 16 (Journal) / 35 (Google scholar) records
- A.18. **Investigation Of The Phase Diagram And Bulk Thermodynamic Properties Using The Polyakov – Nambu – Jona-Lasinio Model With Eight-Quark Interactions**
Abhijit Bhattacharyya, Paramita Deb, Sanjay K. Ghosh and Rajarshi Ray
Published in Phys.Rev. D82 (2010) 014021(1-11)
DOI: 10.1103/PhysRevD.82.014021
e-Print: arXiv:1003.3337 [hep-ph]
Cited by 47 (Inspires/arXiv) / 27 (Journal) / 49 (Google scholar) records

- A.19. **Rigorous Treatment Of Electrostatics For Spatially Varying Dielectrics Based On Energy Minimization**
Oleg I. Obolensky, Timothy P. Doerr, Rajarshi Ray and Yi-Kuo Yu
Published in Phys. Rev. E79 (2009) 041907(1-15)
DOI: 10.1103/PhysRevE.79.041907
e-Print: arXiv:0901.0129 [physics.class-ph]
Cited by 3 (Inspires/arXiv) / 1 (Journal) / 4 (Google scholar) records
- A.20. **Polyakov – Nambu – Jona-Lasinio Model With A Vandermonde Term**
Sanjay K. Ghosh, Tamal K. Mukherjee, Munshi G. Mustafa and Rajarshi Ray
Published in Phys.Rev. D77 (2008) 094024(1-10)
DOI: 10.1103/PhysRevD.77.094024
e-Print: arXiv:0710.2790 [hep-ph]
Cited by 68 (Inspires/arXiv) / 42 (Journal) / 81 (Google scholar) records
- A.21. **Wakes In A Collisional Quark-Gluon Plasma**
Purnendu Chakraborty, Munshi G. Mustafa, Rajarshi Ray and Markus H. Thoma
Published in J.Phys. G34 (2007) 2141-2152
DOI: 10.1088/0954-3899/34/10/004
e-Print: arXiv:0705.1447 [hep-ph]
Cited by 14 (Inspires/arXiv) / 2 (Journal) / 20 (Google scholar) records
- A.22. **Thermodynamics Of The Polyakov – Nambu – Jona-Lasinio Model With Nonzero Baryon And Isospin Chemical Potentials**
Swagato Mukherjee, Munshi G. Mustafa and Rajarshi Ray
Published in Phys.Rev. D75 (2007) 094015(1-14)
DOI: 10.1103/PhysRevD.75.094015
e-Print: hep-ph/0609249
Cited by 108 (Inspires/arXiv) / 66 (Journal) / 111 (Google scholar) records
- A.23. **Susceptibilities And Speed Of Sound From The Polyakov – Nambu – Jona-Lasinio Model**
Sanjay K. Ghosh, Tamal K. Mukherjee, Munshi G. Mustafa and Rajarshi Ray
Published in Phys.Rev. D73 (2006) 114007(1-10)
DOI: 10.1103/PhysRevD.73.114007
e-Print: hep-ph/0603050
Cited by 174 (Inspires/arXiv) / 118 (Journal) / 195 (Google scholar) records
- A.24. **Stochastic Resonance In Underdamped, Bistable Systems**
Rajarshi Ray and Supratim Sengupta
Published in Phys. Lett. A 353 (2006) 364-371
DOI: 10.1016/j.physleta.2005.12.105
e-Print: arXiv:nlin/0506039 [nlin.PS]
Cited by 12 (Inspires/arXiv) / 21 (Journal) / 23 (Google scholar) records
- A.25. **Chiral Dynamics In QCD At Finite Chemical Potential**
Sourendu Gupta and Rajarshi Ray
Published in Phys.Rev. D70 (2004) 114015(1-11)
DOI: 10.1103/PhysRevD.70.114015
e-Print: hep-lat/0409126
Cited by 19 (Inspires/arXiv) / 20 (Journal) / 23 (Google scholar) records

- A.26. **Sustaining Supercooled Mixed Phase Via Resonant Oscillations Of The Order Parameter**
Rajarshi Ray, Soma Sanyal and Ajit M. Srivastava
Published in Int.J.Mod.Phys. A19 (2004) 1511-1524
DOI: 10.1142/S0217751X0401818X
e-Print: cond-mat/0201063
Cited by 0 (All) records
- A.27. **Measuring Cosmic Defect Correlations In Liquid Crystals**
Rajarshi Ray and Ajit M. Srivastava
Published in Phys.Rev. D69 (2004) 103525(1-10)
DOI: 10.1103/PhysRevD.69.103525
e-Print: hep-ph/0110165
Cited by 11 (Inspires/arXiv) / 12 (Journal) / 24 (Google scholar) records
- A.28. **Stochastic Production Of Kink-antikink Pairs In The Presence Of An Oscillating Background**
Rajarshi Ray and Supratim Sengupta
Published in Phys.Rev. D65 (2002) 063521(1-10)
DOI: 10.1103/PhysRevD.65.063521
e-Print: hep-ph/0111152
Cited by 4 (Inspires/arXiv) / 4 (Journal) / 8 (Google scholar) records
- A.29. **Formation And Collapse Of False Vacuum Bubbles In Relativistic Heavy-Ion Collisions**
Rajarshi Ray, Soma Sanyal and Ajit M. Srivastava
Published in Nucl.Phys. A712 (2002) 329-356
DOI: 10.1016/S0375-9474(02)01168-5
e-Print: hep-ph/0105272
Cited by 1 (All) records
- A.30. **Resonant Production Of Topological Defects**
Sanatan Digal, Rajarshi Ray, Supratim Sengupta and Ajit M. Srivastava
Published in Phys.Rev.Lett. 84 (2000) 826-829
DOI: 10.1103/PhysRevLett.84.826
e-Print: hep-ph/9911446
Cited by 7 (Inspires/arXiv) / 8 (Journal) / 15 (Google scholar) records
- A.31. **Possibility Of Forming A Large DCC In Ultra-Relativistic Heavy-Ion Collisions**
Sanatan Digal, Rajarshi Ray, Supratim Sengupta and Ajit M. Srivastava
Published in Int.J.Mod.Phys. A15 (2000) 2269-2288
DOI: 10.1142/S0217751X0000094X
e-Print: hep-ph/9805227
Cited by 9 (Inspires/arXiv) / 14 (Google scholar) records
- A.32. **Observing Correlated Production Of Defect and Antidefects In Liquid Crystals**
Sanatan Digal, Rajarshi Ray and Ajit M. Srivastava
Published in Phys.Rev.Lett. 83 (1999) 5030-5033
DOI: 10.1103/PhysRevLett.83.5030
e-Print: hep-ph/9805502
Cited by 24 (Inspires/arXiv) / 31 (Journal) / 57 (Google scholar) records

B. Other Research Articles:

B.1. Centrality Dependence Of Chemical Freeze-out Parameters From Net-proton And Net-charge Fluctuations Using Hadron Resonance Gas Model

Rama Prasad Adak, Supriya Das, Sanjay K. Ghosh, Rajarshi Ray and Subhasis Samanta
e-Print: arXiv:1609.05318 [nucl-th]
Cited by 1 (All) records

B.2. Net Charge Fluctuations As A Signal Of QGP From Polyakov – Nambu – Jona-Lasinio Model

Abhijit Bhattacharyya, Supriya Das, Sanjay K. Ghosh, Sibaji Raha, Rajarshi Ray, Kinkar Saha and Sudipa Upadhaya
e-Print: arXiv:1212.6010 [hep-ph]
Cited by 7 (Inspires/arXiv) / 3 (Google scholar) records

B.3. Entropy Scaling And Thermalization In Hadron-Hadron Collisions At LHC

Supriya Das, Sanjay K. Ghosh, Sibaji Raha and Rajarshi Ray
e-Print: arXiv:1104.3053 [hep-ph]
Cited by 0 (All) records

B.4. A Stochastic Approach To Pionization

Abhijit Bhattacharyya, Sanjay K. Ghosh, Tamal K. Mukherjee, Sibaji Raha and Rajarshi Ray
Unpublished
Cited by 0 (All) records

C. Books / Edited Volumes / Reports:

C.1. Challenges In QCD Matter Physics – The Compressed Baryonic Matter Experiment At FAIR

CBM Collaboration
e-Print: arXiv:1607.01487 [nucl-ex]
Report of the CBM Collaboration to the FAIR Scientific Council, 2016
Cited by 6 (Inspires/arXiv) / 1 (Google scholar) records

C.2. Formation Of Vortex-Antivortex Pairs

Sanatan Digoal, Rajarshi Ray, Supratim Sengupta and Ajit M. Srivastava
Published in Connectivity and Superconductivity edited by Jorge Berger and Jacob Rubinstein, Monographs LNP m62 (2002) 215: Springer Publication
DOI 10.1007/3-540-44532-3_10
Cited by 0 (All) records

D. Doctoral Thesis:

D.1. Studies Of Phase Transition Dynamics: Formation Of Disoriented Chiral Condensates And Topological Defects

Rajarshi Ray
Published in the Thesis submitted to the Utkal University for the degree of Doctor of Philosophy in Science (Physics) (2002) 1-169
Cited by 0 (All) records

E. Proceedings:

E.1. **Scaling Behaviour Of μ_B/T In The STAR Experiment**

Rama Prasad Adak, Supriya Das, Sanjay K. Ghosh, Rajarshi Ray and Subhasis Samanta
Published in DAE Symp.Nucl.Phys. 61 (2016) 828-829

Prepared for the Proceedings of 61st DAE-BRNS Symposium on Nuclear Physics, held at Saha Institute of Nuclear Physics, Kolkata, India, during 5-9 December, 2016

Cited by 0 (All) records

E.2. **Looking For Possible Volume Scaling Violations In Finite Volume Polyakov – Nambu – Jona-Lasinio Model**

Kinkar Saha, Sudipa Upadhaya, Abhijit Bhattacharyya, Sanjay K. Ghosh, and Rajarshi Ray

Published in DAE Symp.Nucl.Phys. 60 (2015) 802-803

Prepared for the Proceedings of 60th DAE-BRNS Symposium on Nuclear Physics, held at the Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, Andhra Pradesh, India, during 7-11 December, 2015

Cited by 0 (All) records

E.3. **Thermal Di-muon From QGP Source At FAIR Energy**

Rama Prasad Adak, Subhasis Chattopadhyay, Supriya Das, Sanjay K. Ghosh, Rajarshi Ray and Subhasis Samanta

Published in DAE Symp.Nucl.Phys. 60 (2015) 798-799

Prepared for the Proceedings of 60th DAE-BRNS Symposium on Nuclear Physics, held at the Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, Andhra Pradesh, India, during 7-11 December, 2015

Cited by 0 (All) records

E.4. **Quark Number Susceptibility: Revisited In Mean Field Theories**

Sanjay K. Ghosh, Sibaji Raha, Rajarshi Ray, Anirban Lahiri, Sarbani Majumder and Munshi G. Mustafa.

Published in DAE Symp.Nucl.Phys. 60 (2015) 17-18

Prepared for the Proceedings of 60th DAE-BRNS Symposium on Nuclear Physics, held at the Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, Andhra Pradesh, India, during 7-11 December, 2015

Cited by 0 (All) records

E.5. **”Soft” And ”Hard” Interactions In Proton-Proton Collisions At LHC Energies**

Sidharth K. Prasad, Supriya Das, Sanjay K. Ghosh, Premomoy Ghosh, Sanjib Muhuri, Tapan K. Nayak and Rajarshi Ray

Published in Proc.Indian Natl.Sci.Acad. 81 (2015) no.1, 213-216

DOI: 10.16943/ptinsa/2015/v81i1/48071

Prepared for the Proceedings of International Conference on Matter at Extreme Conditions : Then & Now (ICMEC 2014), held at Bose Institute, Kolkata, India, during 15-17 January, 2014

Cited by 0 (Inspires/arXiv) / 0 (Journal) / 1 (Google scholar) records

- E.6. Study Of D-measure From Polyakov – Nambu – Jona-Lasinio Model**
 Abhijit Bhattacharyya, Supriya Das, Sanjay K. Ghosh, Sibaji Raha, Rajarshi Ray, Kinkar Saha and Sudipa Upadhaya
 Published in Proc.Indian Natl.Sci.Acad. 81 (2015) no.1, 152-157
 DOI: 10.16943/ptinsa/2015/v81i1/48062
Prepared for the Proceedings of International Conference on Matter at Extreme Conditions : Then & Now (ICMEC 2014), held at Bose Institute, Kolkata, India, during 15-17 January, 2014
 Cited by 0 (All) records
- E.7. Study Of Fluctuations From Polyakov – Nambu – Jona-Lasinio Model**
 Abhijit Bhattacharyya, Supriya Das, Sanjay K. Ghosh, Sibaji Raha, Rajarshi Ray, Kinkar Saha and Sudipa Upadhaya
 Published in Proc.Indian Natl.Sci.Acad. 81 (2015) no.1, 56-61
 DOI: 10.16943/ptinsa/2015/v81i1/48051
Prepared for the Proceedings of International Conference on Matter at Extreme Conditions : Then & Now (ICMEC 2014), held at Bose Institute, Kolkata, India, during 15-17 January, 2014
 Cited by 0 (All) records
- E.8. Study Of Fluctuations In Excluded Volume Hadron Resonance Gas Model**
 Abhijit Bhattacharyya, Supriya Das, Sanjay K. Ghosh, Rajarshi Ray, Subhasis Samanta
 Published in Proc.Indian Natl.Sci.Acad. 81 (2015) no.1, 51-55
 DOI: 10.16943/ptinsa/2015/v81i1/48050
Prepared for the Proceedings of International Conference on Matter at Extreme Conditions : Then & Now (ICMEC 2014), held at Bose Institute, Kolkata, India, during 15-17 January, 2014
 Cited by 0 (All) records
- E.9. Combining EVHRG And PNJL Model In Contrast To Continuum LQCD Data**
 Abhijit Bhattacharyya, Sanjay K Ghosh, Soumitra Maity, Rajarshi Ray, Kinkar Saha, Subhasis Samanta and Sudipa Upadhaya
 Published in DAE Symp.Nucl.Phys. 59 (2014), 774-775
Prepared for the Proceedings of 59th DAE-BRNS Symposium on Nuclear Physics, held at Banaras Hindu University, Varanasi, India, during 8-12 December, 2014
 Cited by 0 (All) records
- E.10. Net Charge Fluctuations In PNJL Model**
 Abhijit Bhattacharyya, Supriya Das, Sanjay K. Ghosh, Sibaji Raha, Rajarshi Ray, Kinkar Saha and Sudipa Upadhaya
 Published in DAE Symp.Nucl.Phys. 59 (2014), 692-693
Prepared for the Proceedings of 59th DAE-BRNS Symposium on Nuclear Physics, held at Banaras Hindu University, Varanasi, India, during 8-12 December, 2014
 Cited by 0 (All) records
- E.11. Thermodynamics Of QCD Matter At Finite Volume**
 Abhijit Bhattacharyya, Paramita Deb, Sanjay K. Ghosh, Rajarshi Ray and Subrata Sur
 Published in DAE Symp.Nucl.Phys. 59 (2014), 674-675
Prepared for the Proceedings of 59th DAE-BRNS Symposium on Nuclear Physics, held at Banaras Hindu University, Varanasi, India, during 8-12 December, 2014
 Cited by 0 (All) records

- E.12. **Behavior Of Shear Viscosity From PNJL Model**
Sanjay K. Ghosh, Sibaji Raha, Rajarshi Ray, Kinkar Saha and Sudipa Upadhaya
Published in DAE Symp.Nucl.Phys. 59 (2014), 694-695
Prepared for the Proceedings of 59th DAE-BRNS Symposium on Nuclear Physics, held at Banaras Hindu University, Varanasi, India, during 8-12 December, 2014
Cited by 0 (All) records
- E.13. **Fluctuations At Finite Volume In Strongly Interacting Matter**
Abhijit Bhattacharyya, Rajarshi Ray and Subrata Sur
Published in DAE Symp.Nucl.Phys. 59 (2014), 708-709
Prepared for the Proceedings of 59th DAE-BRNS Symposium on Nuclear Physics, held at Banaras Hindu University, Varanasi, India, during 8-12 December, 2014
Cited by 0 (All) records
- E.14. **Study Of Charge Fluctuations In Interacting Hadron Resonance Gas Model**
Abhijit Bhattacharyya, Supriya Das, Sanjay K. Ghosh, Rajarshi Ray, Subhasis Samanta
Published in DAE Symp.Nucl.Phys. 58 (2013), 714-715
Prepared for the Proceedings of 58th DAE-BRNS Symposium on Nuclear Physics, held at Bhabha Atomic Research Center, Mumbai, India, during 2-6 December, 2013
Cited by 0 (All) records
- E.15. **Shear Viscosity Due To Quark-Pion Interaction**
Sabyasachi Ghosh, Anirban Lahiri, Sarbani Majumder, Rajarshi Ray and Sanjay K. Ghosh
Published in DAE Symp.Nucl.Phys. 58 (2013), 682-683
Prepared for the Proceedings of 58th DAE-BRNS Symposium on Nuclear Physics, held at Bhabha Atomic Research Center, Mumbai, India, during 2-6 December, 2013
Cited by 0 (All) records
- E.16. **Polyakov Loop And Recombination Dynamics Of Quarks And Gluons**
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Involvement in Projects and Collaborations of Rajarshi Ray:

Extramural Projects (DST, CSIR, DAE, etc.):

1. Co-investigator in Study of Cosmic ray interactions and Cosmic Ray Aerosol Cloud connection in the context of regional climate change, Submitted to DST, Govt. of India (Continuing)
2. Co-investigator in Study of microphysics and dynamics of clouds in eastern Himalayas: Cloud formation and development, Submitted to MOES, Govt. of India (Completed)
3. Co-investigator in Study of thermodynamic properties of strongly interacting matter using QCD inspired model Submitted to DST, Govt. Of India. (Completed)

Collaborations:

1. Involved as collaborator in the Compressed Baryonic Matter experiment at the Facility for Antiproton and Ion Research being developed at Darmstadt, Germany.

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