




University Faculty Details Page on DU Web-site

Title	Dr.	First Name	Shougaijm	Last Name	Somorendro Singh	
Designation	Assistant Professor					
Department	Physics and Astrophysics					
Address (Campus)	North Campus, University of Delhi, Delhi-110007					
(Residence)	D-IV/3, Maurice Nagar, University of Delhi, Delhi-110007					
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Web-Page	http://people.du.ac.in/~sssingh/					
Education						
Subject	Institution	Year	Details			
Ph.D	University of Delhi, Delhi	2003	Thesis topic: High Energy Heavy-Ion Collisions and Quark-Gluon Plasma			
M.Sc Physics	University of Delhi, Delhi	1995	Subjects: GTR AND COSMOLOGY and QFT			
B.Sc	Aligarh Muslim University, UP	1992	Subjects: Physics(H)			
Career Profile						
Organisation / Institution	Designation	Duration	Role			
Hindu College, DU	Lecturer	1999 -2000	Teaching Graduation & Research			
Deen Dayal Upadhaya College, DU, Depart. Of Physics and Astrophysics, University of Delhi	Lecturer Assistant Professor	2000-2002	Teaching Graduation & Research			
		2002-onwards	Teaching post-graduation & Research			
Research Interests / Specialization						
<ul style="list-style-type: none"> • High Energy Physics and Quark-Gluon Plasma • QCD Phase Structure • Dilepton/Photon production from QGP • Compact star and boson stars 						
Teaching Experience (Subjects/Courses Taught)						
Teaching From 1999 Onwards (Undergraduate upto 2002 + Postgraduation)						
Subs Taughts:						
(a) Mechanics						
(b) Electricity & Magnetism						
(c) Mathematical Physics						
(d) Classical Mechanics						

- (e) Quantum Mechanics (I)
- (f) Quantum Mechanics (II)
- (g) Statistical Mechanics
- (h) Electromagnetic theory
- (i) Radiation Theory
- (j) Computer Labs C++ Programming (M.Sc Physics (F))
- (k) M. Tech. Computer Programming
- (l) Wave & Optics Lab (M. Sc(p))
- (m) Nuclear Lab(M. Sc(p))
- (n) Solid State Physics (p)

Honors & Awards

CSIR-NET JRF 1995 and SRF 1997

Editor: Nil

Editorial Board: NIL

Publications (LAST FIVE YEARS) in Int. refereed journals:

- (1) Speed of sound in a QGP with one loop correction in mean field potential

Ind. J. Phys. 92(2) 245,2018

- (2) Collision strength and effective collision strength for BrXXVII

Can J Phys. 95(2) (2017) 1127

- (3) Implication of occupancy of 2S_{1/2} state in ad-shell within RMF+BCS approach

Int. J. Mod. Phys. E 26, 1750072 (2017)

- (4) Quark number density and susceptibility calculation under one loop correction in the mean field potential

Pramana- J. Phys. (2017) 85.

- (5) Oscillation of boson star in Newtonian approximation

Mod. Phys. Lett. A 32 (2017) 1750037.

- (6) Collision Strength and effective collision strength for BaXLVIII

Can. J. Phys. 95 (2017) 173

- (7) A study on quark-gluon plasma equation of state using thermal quark mass

EPJ Web of Conf. 137 (2017) 13008.

- (8) Dilepton production as a useful probe of quark-gluon plasma with temperature dependent

Chemical potential quark mass.

Int. J. Mod. Phys. E, 25 (2016) 1660049

(9) Direct photon production at finite chemical potential from QGP

Int. J. Mod. Phys. A, 30 (2015) 1550020.

(10) Free energy and direct photon emission at finite chemical potential

J. Phys. Conf. Ser. 535 (2014) 012002.

(11) Quark-gluon plasma fireball evolution with one loop correction in the mean field potential

Prog. Theor. Exp. Phys. 2014, 103D02.

(12) Photon production in high energy nuclear collision of quark –gluon Plasma

Int. J. Mod. Phys. A, 29 (2014) 1450110.

(13) Restudy of surface tension of QGP with one loop correction in the mean-field potential

Int. J. Mod. Phys. A, 29 (2014) 1450097

(14) Equation of state of Quark-Gluon Plasma using a simple statistical model

Int. J. Th. Phys. 53 (2014) 2688-2696

(15) Dilepton production at thermal dependent baryonic QGP

Can. J. Phys. 92 (2014) 31-35.

(16) RMF+BCS approach for drip-line isotopes of Si

Can. J. Phys. 92 (2014) 253-258.

(17) Degenerate neutrino mass model revisited

Euro. Intl. J of Sci. and Tech. 2, (2013), 81-90.

(18) Free energy evolution and photon radiation from QGP

ISRN H. E. Phys. 2013, ID 156747

(19) Dilepton emission at temperature dependent baryonic quark-gluon plasma

J. Mod. Phys. 4 (2013) 582-586.

Published In proceedings (In Last Five Years):

- (1) A density of states for QGP fireball formation in heavy-ion collision incorporating hydrodynamical feature in the model

Springer Proceeding in Physics 203,313,2018

- (2) Diphoton emission from equilibrium quark-gluon plasma

Springer Proceeding in Physics 203,435,2018

- (3) Rotating boson star under weak gravity potential

Springer Proceeding in Physics 203,789,2018

- (4) Curvature effect on QGP equation of state

Springer Proceeding in Physics 203,867,2018

- (5) Quark-hadron phase transition at high chemical potential in RHIC

Proc of DAE-BRNS Sump on Nuclear Phys., (2016)

- (6) QGP fireball creation in two loop correction in mean field potential

Proc of DAE-BRNS Sump on Nuclear Phys., (2016)

- (7) Photon emission from a quark-gluon plasma

Proc of DAE-BRNS Sump on Nuclear Phys., (2016)

- (8) Quark-hadron phase transition at high chemical potential in relativistic heavy-ion collision

Proc. of DAE-BRNS Sump on Nuclear Physics (2016)

- (9) Susceptibility calculation under one loop correction in the mean field potential

Proc. On Natn. Conf. on CICAHEP, 2015, PS3, (1-6).

- (10) QGP-Hadron phase structure in a statistical model using Cornell, Richardson and Peshier potential

Proc. Of DAE-BRNS Sump. On Nucl. Phys., (2015) 60.

- (11) Modified surface tension of a QGP-droplet under one loop correction in Peshier potential

Proc. Ind. Natn. Sci. Aca. 2015, 174-178.

(12) Dilepton emission from heavy-ion collision of quark-gluon plasma

Proceeding of Science, POS, CPOD2015, 71.

(13) Velocity of sound in a quark- gluon plasma with one loop correction in mean field potential

Proceeding of DAE Symp. Nucl. Phys. (2014) 59.

(14) Direct photon emission from a chemically non-equilibrated quark-gluon plasma at finite

Chemical potential

Proceeding of Science, POS,DIS2014,171

(15) Phenomenological study of QGP fireball thermodynamics

Proc of DAE-BRNS Nuclear Phys., (2013) 53.

Books / Monographs

<u>Year of Publication</u>	<u>Title</u>	<u>Publisher</u>	<u>Co-Author</u>
NIL		NIL	NIL

In Indexed/ Peer Reviewed Journals

<u>Year of Publication</u>	<u>Title</u>	<u>Journal</u>	<u>Co-Author</u>
NIL		NIL	NIL

Article

Total Publication Profile *optional*

<u>Books</u>
NIL

<u>In Indexed/ Peer Reviewed Journals: 24</u>
<u>Articles</u>
<u>Conference Presentations :</u> <ol style="list-style-type: none"> 1. Free energy evolution of QGP in two loop correction in Indian Sc Congress, 2018, Imphal, Manipur 2. Effect of cosmological constant in the rotation of boson star in NYSYM2017, Ganil, France 3. QGP fireball creation in two loop correction in mean field potential, DAE Sym on Nuclear Phys. 2016, Kolkata 4. Quark-hadron phase transition at high chemical potential in RHIC, DAE Sym on Nuclear Phys, 2016, Kolkata, India 5. Photon emission from quark-gluon plasma, DAE Sym. On Nuclear Phys. 2016, Kolkata, India 6. Diphoton emission from heavy ion collision, DAE Symp. HEP 2016, Delhi, India 7. Quark number density and susceptibility with one loop correction, ATHIC 2016, Delhi, India 8. Susceptibility calculation under one loop correction in mean field potential, CICHEP15, Dibrugarh, India 9. Dilepton emission from heavy ion collision, CPOD 2014, Beliefeld, Germany, 2014. 10. Free energy and photon production at finite chemical potential, Winter Workshop 2014, Galvezton, Texas, USA 11. QGP fireball evolution with one loop correction in the peshier potential, INPC 2013, Florence, Italy 12. Dilepton emission in temperature dependent baryonic QGP, Nucleus-Nucleus collision 2012, USA 13. Dilepton production in finite temperature Quark-Gluon Plasma in NUSY10, Japan 14. Nucleation rate of the QGP droplet at finite quark chemical potential, ICQGP& Astrophysics, 2010, Gao, India 15. Quark-Hadron phase transition of QGP fireball in a hadronic medium using Richarson potential in QuarkMatter09 16. Effect of finite chemical potential on QGP-Hadron phase transition in a statistical model of fireball formation in Quark Matter 2008, Jaipur, India
Public Service / University Service / Consulting Activity
Resident Tutor, Gwyer Hall (2010 onward to Feb. 2015), Members of selection committees in Various colleges (T&NT), Members of selection committees in University (NT) Member of Board of research studies, Delhi University Member of Departmental Research Committee, Physics & Astrophysics. Dept. North East Nodal Officer, Physics & Astrophysics. Member of Grievance Committee (SC/ST, OBC Adm.) University of Delhi
Professional Societies Memberships
Nil
Projects (Major Grants / Collaborations)
Nil
Other Details
Nil



(Signature of Faculty Member)

(Signature & Stamp of Head of the Department)