




## 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					
Phone No (Campus)	91-11-27667793					
(Residence) optional	7303287899/8505986097					
Mobile	09354235226, 09868942410					
Fax	011-27667061					
Email	sssingh@physics.du.ac.in					
Web-Page	<a href="http://people.du.ac.in/~sssingh/">http://people.du.ac.in/~sssingh/</a>					
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"> <li>• High Energy Physics and Quark-Gluon Plasma</li> <li>• QCD Phase Structure</li> <li>• Dilepton/Photon production from QGP</li> <li>• Compact star and boson stars</li> </ul>						
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 and
- (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) Effect of chemical potential in the rotation of boson star

**Ind. J. Phys.(Accepted)**

B. Jarwal, S. Somorendro Singh

- (2) Effect of two loop correction in the formation of QGP droplet

**Pramana J Phys. ,92:69, 2019.**

S. Somorendro Singh, G. Saxena

- (3) Structural properties and decay modes of  $Z = 122, 120$  and  $118$  superheavy nuclei

**Int. J. Mod. Phys. E, 2019**

G. Saxena et al,

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

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

S. Somorendro Singh, R. Ramanathan

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

**Can J Phys. 95(11), (2017) 1127**

A Goel, et al,

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

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

G. Saxena, et al,

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

**Pramana- J. Phys. (2017) 85.**

S. Somorendro Singh, G. Saxena

- (8) Oscillation of boson star in Newtonian approximation

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

Bh. Jarwal, S. Somorendro Singh

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

**Can. J. Phys. 95 (2017) 173**

A Goel, et. al,

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

**EPJ Web of Conf. 137 (2017) 13008.**

Y. Kumar, S. Somorendro Singh

- (11) 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**

Y. Kumar, S. Somorendro Singh

- (11) Direct photon production at finite chemical potential from QGP

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

S. Somorendro Singh, Y. Kumar

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

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

S. Somorendro Singh, Y. Kumar

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

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

S. Somorendro Singh, R. Ramanathan

(14) Photon production in high energy nuclear collision of quark –gluon Plasm

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

S. Somorendro Singh, Y. Kumar

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

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

S. Somorendro Singh, A. K Jha, K. K. Gupta

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

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

Dharmendra Gosain, S. Somorendro Singh

(17) Dilepton production at thermal dependent baryonic QGP

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

Y. Kumar, S. Somorendro Singh

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

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

**G. Saxena, et al,**

(19) Degenerate neutrino mass model revisited

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

**N. N. Singh et. al,**

(20)Free energy evolution and photon radiation from QGP

**ISRN H. E. Phys. 2013, ID 156747**

S. Somorendro Singh, Y Kumar

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

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

S. Somorendro Singh, Y. Kumar

**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

<u>Article</u>
Total Publication Profile <b>optional</b>
<u>Books</u> NIL
<u>In Indexed/ Peer Reviewed Journals: 26</u>
<u>Articles</u>
<u>Conference Presentations In last five years</u> <ol style="list-style-type: none"> <li>1. Free energy through the loop corrections in Int. Conf. on Physics, Society and Technology, 17-19 Jan. 2019, Delhi.</li> <li>2. Free energy evolution of QGP in two loop correction In Indian Sc Congress 2018, Manipur</li> <li>3. Effect of cosmological constant in boson star rotation in NUSYM 2017, France.</li> <li>4. QGP fireball creation in two loop correction in mean field potential, DAE Sym on Nuclear Phys. 2016, Kolkata</li> <li>5. Quark-hadron phase transition at high chemical potential in RHIC, DAE Sym on Nuclear Phys, 2016, Kolkata, India</li> <li>6. Photon emission from quark-gluon plasma, DAE Sym. On Nuclear Phys. 2016, Kolkata, India</li> <li>7. Rotating boson star under weak gravity potential DAE Sym HEP 2016, Delhi, India</li> <li>8. Curvature effect on QGP equation of state, DAE Sym HEP 2016, Delhi, India</li> <li>9. Diphoton emission from heavy ion collision, DAE Symp. HEP 2016, Delhi, India</li> <li>10. Quark number density and susceptibility with one loop correction, ATHIC 2016, Delhi, India</li> <li>11. Susceptibility calculation under one loop correction in mean field potential, CICHEP15, Dibrugarh, India</li> <li>12. Dilepton emission from heavy ion collision, CPOD 2014, Beliefeld, Germany, 2014.</li> <li>13. Free energy and photon production at finite chemical potential, Winter Workshop 2014, Galvezton, Texas, USA</li> <li>14. QGP fireball evolution with one loop correction in the peshier potential, INPC 2013, Florence, Italy</li> </ol>
<u>Public Service / University Service / Consulting Activity</u>
Dy. Dean Students Welfare, University of Delhi, Delhi from 2 Dec, 2018. Convenor, Sub Committee, B. Sc(h) Physics from 2017. 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
<u>Professional Societies Memberships</u>
Nil
<u>Projects (Major Grants / Collaborations)</u>
Nil
<u>Other Details</u>

Nil



(Signature of Faculty Member)

(Signature & Stamp of Head of the Department)