

# **Curriculum Vitae: March07\_2024**

## **Dr. Muhammad Jamil S/O Mansab Ali Awan**

**Tenured Associate Professor in Physics  
Department of Physics  
COMSATS University Islamabad, Lahore Campus  
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### **Terminal Qualification: Ph.D.**

#### **PhD Supervision:**

##### **1-Mr. Arroj Ahmad Khan:**

“Study of potentials in dense plasmas” **Completed Nov 2019**

##### **2-Areeb Fatima:**

“Collective interactions in dense plasmas” **Completed Dec 2019**

##### **3- Zahid Mir:**

“Study of Nonlinear Interactions in Dense Plasmas” **Completed Aug 2021**

##### **4- Ayesha Rehman:**

“The study and analysis of collective interactions in low beta dense Plasmas” **Completed Sept 2022**

##### **5- Muhammad Siddique ( Supervisor 2):**

“Study of collective modes in quantum plasmas” **Completed Jan 2020**

#### **MS (M. Phil) Supervision:**

##### **1- Zahid Mir:**

“Study of Jeans Stability in Quantum Dusty Magneto Plasmas” **Completed June 2014**

##### **2- Muhammad Siddique, (Co supervision.):**

“Study of acoustic modes in quantized semiconductor plasmas” **Completed**

##### **3-Muhammad Amir Shabbir**

“Jeans-Alfvén Instability in Quantum Magneto Plasmas” **Completed July 2016**

##### **4- Gazanfar Ali**

“Streaming Jeans-Alfven Instability in quantum Magneto Plasmas” **Completed July 2016**

##### **5- Sahar Akram**

“The exchange Correlation effect on Jeans-Alfven Instability in quantum Magneto Plasmas” **Completed July 2016**

##### **6- Muhammad Jhangir**

“Electrostatic Instability in Bounded Semiconductor Quantum Plasma” **Completed June 2017**

**7- Muhammad Tanveer Abbas**

"Streaming Instability with Exchange Field in Quantum Dusty Plasma" **Completed June 2017**

**8-Sheraz Sharif**

"Low Frequency Sonic Plasmon Instability in Quantum Semiconductor Plasmas" **Completed June 2018**

**9- Rubina**

"Study of dust-acoustic-waves with dust charge fluctuation in Quantum Plasma" **Completed June 2018**

**10-Asif Zahoor**

"Study of Streaming Dust Acoustic Instability in Quantum Plasmas" **Completed June 2018**

**11- Umair Ahmad**

"The Study of Dust Acoustic Waves in Degenerate Plasma" **Completed June 2018**

**12- Tayyaba Zafar**

"Instability Analysis of Longitudinal Surface Mode in Quantum Plasmas" **Completed Jan 2019**

**13- Aftab Ahmad**

"Study of Quantized Magnetic Field in Streaming Gravitational Dense Plasmas" **Completed Jan 2019**

**14-Amir Sohail**

Study of Magnetic Quantization in Gravitational Inhomogeneous Quantum Plasma" **Completed Jan 2019**

**15) Zahra Shahid**

"Landau Quantization effect on Jeans Instability in Dense Plasmas" **Completed July 2019**

**16) Abdul Waheed**

"Oxygen Cyclotron Harmonic Waves in the Inner Magnetosphere" **Completed July 2019**

**17) Uzma Maqsood**

"Electromagnetic Wave Instability with Charge Fluctuation in Semiconductor" **Completed July 2019**

**18) Mubeen Ali**

"Temperature Contributions on Large Amplitude High Frequency Oscillations in Quantum Plasmas"

**Completed July 2019**

**19) Iqra Naeem**

"Alfven Instability in Charge Fluctuating Quantum Plasma" **Completed July 2019**

**20) Saad Samee**

"Buneman Instability in Cylindrical Quantum Plasmas" **Completed Feb 2020**

**21) M. Asif Nazir**

"Kelvin-Helmholtz Instability in Quantum Plasmas" **Completed July 2021**

**22) M. Ahsan Naeem**

"Magneto sonic Instability with Radiation Impact in Semiconductors" **Completed March 2022**

**23) Aashar Sajjad**

"Radiation impact on acoustic waves in Semiconductor Plasmas" **Completed March 2022**

**24) Waseem Abbas**

"Low Hybrid Instability with Radiation Pressure Effects in Semiconductor Plasma" **Completed March 2022**

## **Research Awards:**

- Pakistan Council for Science and Technology Research Productivity Award **2011 ,2012, 2013**
- COMSATS Research Productivity Award **2014,2015, 2016, 2017**

## **Advisory Membership:**

- Member **BOS**, Department of Physics, University of the Punjab, Lahore
- Member **BOS**, Department of Physics, Riphah International University, Lahore Campus
- Member graduate committee, Department of Physics, CUI Lahore

## **External Examiner of PhD Theses:**

- 1) Department of Physics, Government College University Faisalabad.
- 2) Department of Physics, Malakand University, Malakand.
- 3) Department of Physics, Riphah International University, Lahore Campus.

## **External Examiner of MS Theses:**

- 1) Department of Physics, Lahore College for Women University, Lahore.
- 2) Department of Physics, GC University Lahore.
- 3) Department of Physics, Government College University Faisalabad.
- 4) Department of Physics, Lahore Garrison University, Lahore.
- 5) Department of Physics, Mirpur University of Science and Technology, Mir Pur.
- 6) Department of Physics, Malakand University, Malakand.
- 7) Department of Physics, Riphah International University, Lahore Campus.

## **Research Papers: (IF: Impact factor)**

IF: Physics of Plasmas (PoP) = <b>2.357</b> ,	Journal of Plasma Physics (JPP) = <b>2.691</b>
Arabian Journal of Science and Engineering (AJSE) = <b>2.807</b>	Zeitschrift für Naturforschung A(ZNA) = <b>1.712</b>
Plasma Physics and Control Fusion = <b>2.532</b>	The European Physical Journal Plus(Eur. Phys. J. Plus)= <b>2.758</b>
Journal of Physics D: Applied Phys(J. Phys. D) = <b>2.373</b>	Astrophysics and Space Science (Astro.phys.Space sc)= <b>1.909</b>
Physica Scripta(Phys. Scr)= <b>2.9</b>	Physica B: Condensed matter (Phys B: cond.matter) = <b>2.8</b>
International Journal of Modern Physics B= <b>1.7</b>	AIP Advances = <b>1.6</b>

Sr	Title/ Authors	J	Vol, page	Year
1	Jeans instability in a quantum dusty magnetoplasma M. Salimullah, <b>M. Jamil</b> , H. A. Shah, G. Murtaza	Phys. Plasmas	<b>16</b> , 14502	2009

2	Drift wave instability in a nonuniform quantum dusty Magnetoplasma  M. Salimullah, <b>M. Jamil</b> , I. Zeba, Ch. Uzma, and H. A. Shah	Phys. Plasmas	<b>16</b> , 34503	2009
3	Potentials in a nonuniform quantum dusty magnetoplasma M. Salimullah, I. Zeba, Ch. Uzma, <b>M. Jamil</b>	Phys. Plasmas	<b>16</b> , 33703	2009
4	Electromagnetic waves in dusty magnetoplasmas using two-potential theory.  K. Zubia, <b>M. Jamil</b> , M. Salimullah	Phys. Plasmas	<b>16</b> , 94501	2009
5	Parametric interactions in ion-implanted piezoelectric semiconductor plasmas S. Ghosh, P. Thakur, N. Yadav, <b>M. Jamil</b> , M. Salimullah	AJSE	<b>35</b> ,1A, 231	2010
6	Modified screening potential in a high density inhomogeneous quantum dusty magnetoplasma A. Hussain, I. Zeba, M. Salimullah, G. Murtaza, <b>M. Jamil</b>	Phys. Plasmas	<b>17</b> , 54504	2010
7	The parametric decay of Alfvén waves into shear Alfvén waves and dust lower hybrid waves <b>M. Jamil</b> , H. A. Shah, M. Salimullah, K. Zubia, I. Zeba, Ch. Uzma	Phys. Plasmas	<b>17</b> , 73703	2010
8	Colloidal crystal formation in a semiconductor quantum plasma I. Zeba, Ch. Uzma, <b>M. Jamil</b> , M. Salimullah, P. K. Shukla	Phys. Plasmas	<b>17</b> , 32105	2010
9	The parametric decay of DIA waves in nonuniform quantum dusty magnetoplasmas. <b>M. Jamil</b> , M. Shahid, Waris Ali, M. Salimullah, H. A. Shah, G. Murtaza	Phys. Plasmas	<b>18</b> , 63705	2011
10	Erratum “The parametric decay of DIA waves in nonuniform quantum dusty magnetoplasmas”. <b>M. Jamil</b> , M. Shahid, Waris Ali, M. Salimullah, H. A. Shah, G. Murtaza	Phys. Plasmas	<b>18</b> , 089902	2011
11	Quantum modification of dust shear Alfvén wave in plasmas <b>M. Jamil</b> , M. Shahid, I. Zeba, M. Salimullah, H. A. Shah, G. Murtaza	Phys. Plasmas	<b>19</b> , 23705	2012
12	Stability analysis of self-gravitational electrostatic drift waves for a streaming nonuniform quantum dusty magnetoplasma M. F. Bashir, <b>M. Jamil</b> , G. Murtaza, M. Salimullah, H. A. Shah	Phys. Plasmas	<b>19</b> , 43701	2012
13	Diamagnetic drift instabilities in collisional non-uniform quantum dusty Magnetoplasmas <b>M. Jamil</b> , Ch. Uzma, K. Zubia, I. Zeba, H. M. Rafique, M. Salimullah	JPP	<b>78</b> , 0589	2012
14	Multi electron species and shielding potentials in plasmas Arroj A. Khan, A. Rasheed, <b>M. Jamil</b> , G. Murtaza	Phys. Plasmas	<b>19</b> , 114501	2012
15	Spin effect on parametric interactions of waves in magnetoplasmas M. Shahid, D. B. Melrose, <b>M. Jamil</b> , G. Murtaza	Phys. Plasmas	<b>19</b> , 12114	2012

16	Shukla-Nambu-Salimullah Potential with multi electron species in magnetoplasmas Arroj A. Khan, <b>M. Jamil</b> , A. Rasheed, and G. Murtaza	Phys. Plasmas	<b>20</b> , 022107	2013
17	Beam driven Upper-Hybrid Wave Instability in quantized semiconductor plasmas, <b>M. Jamil</b> , A. Rasheed, Ch. Rozina, W. Moslem, M. Salimullah	Phys. Plasmas	<b>21</b> , 020704	2014
18	Beam excited acoustic instability in semiconductor quantum plasmas A. Rasheed, <b>M. Jamil</b> , M. Siddique, F. Huda, Young-Dae Jung	Phys. Plasmas	<b>21</b> , 062107	2014
19	Electromagnetic wave instability in a relativistic electron-positron-ion plasma Ch. Rozina, N. L. Tsintsadze, <b>M. Jamil</b> , A. Rasheed, S. Ali	Astr Sp.s	<b>353</b> (2),485	2014
20	Renormalization screening and collision induced quantum interference in dense plasmas Young-Dae Jung, A. Rasheed, <b>M. Jamil</b>	Phys. Plasmas	<b>21</b> , 074503	2014
21	Shielding with the dynamics of electron acoustic wave in multi-electron plasmas A. Rasheed, <b>M. Jamil</b> , Arroj A. Khan, W. M. Moslem	Astrophysics and Space science	<b>354</b> , 395	2014
22	Jeans stability in collisional quantum dusty magnetoplasmas <b>M. Jamil</b> , Zahid Mir, M. Asif and M. Salimullah	Phys. Plasmas	<b>21</b> , 092111	2014
23	Dust-lower-hybrid instability with fluctuating charge in quantum plasmas <b>M. Jamil</b> , M. Ali, A. Rasheed, K. Zubia, and M. Salimullah	Phys. Plasmas	<b>21</b> , 032107	2015
24	Quantum Electron-Exchange Effects on the Buneman Instability in Quantum Plasma Woo-Pyo Hong, <b>M. Jamil</b> , A. Rasheed and Young-Dae Jung	Z. Naturforsch .A	<b>70(6)</b> , 413	2015
25	Karpman-Washimi magnetization with electron-exchange effects in quantum plasmas Woo-Pyo Hong, <b>M. Jamil</b> , A. Rasheed, and Young-Dae Jung	Phys. Plasmas	<b>22</b> , 073302	2015
26	Jeans instability with exchange effects in quantum dusty Magnetoplasmas <b>M. Jamil</b> , A. Rasheed, Ch. Rozina, Y.-D. Jung, and M. Salimullah	Phys. Plasmas	<b>22</b> , 082113	2015
27	Wake potential with exchange-correlation effects in semiconductor quantum plasmas Arroj A. Khan, <b>M. Jamil</b> , and A. Hussain	Phys. Plasmas	<b>22</b> , 092103	2015
28	Low frequency hybrid instability in quantum magneto semiconductor plasmas A. Rasheed, <b>M. Jamil</b> , F. Areeb, M. Siddique and M. Salimullah	J.Phys.D	<b>49</b> , 175109	2016
29	Propagation of ultra-intense electromagnetic waves through electron-positron-ion plasma, Ch. Rozina, N. L. Tsintsadze, and <b>M. Jamil</b>	Phys. Plasmas	<b>23</b> , 072303	2016

30	Shukla-Spatschek diffusion effects on the spatial damping of space-charge waves in a turbulent plasma waveguide Woo-Pyo Hong, <b>M. Jamil</b> , A. Rasheed and Young-Dae Jung	Eur. Phys. J. Plus	<b>131</b> , 399	2016
31	Potential surface waves at the vacuum-radiative collisional plasma interface, Arroj A. Khan, Ch. Rozina, and <b>M. Jamil</b>	Phys. Plasmas	<b>23</b> , 112111	2016
32	SNS potential with exchange field in quantum dusty plasmas I. Zeba, Maryam Batool, Arroj. A. Khan, <b>M. Jamil</b> and Ch. Rozina	Plasma Phys.& Control.Fusion	<b>59</b> , ,025008	2017
33	Jeans-Alfvén instability in quantum dusty Magnetoplasmas, <b>M. Jamil</b> , A.Rasheed, M. Amir, G. Abbas, Young-Dae Jung,	J. Phys. Plasmas	<b>83</b> , 90583010 6	2017
34	Low frequency waves in streaming quantum dusty plasmas Ch. Rozina, , <b>M. Jamil</b> , , Arroj A. Khan, , I. Zeba, and , and J. Saman	Phys. Plasmas	<b>24</b> , 093702	2017
35	Shear Alfvén Wave with Quantum Exchange Correlation Effects in Plasmas Zahid Mir, <b>M. Jamil</b> , A. Rasheed and M. Asif	Z. Naturforsch .A	<b>72(10)</b> , 891	2017
36	Raman three-wave interaction in partially spin polarized plasma M. Shahid, Z. Iqbal, <b>M. Jamil</b> , and G. Murtaza	Phys. Plasmas	<b>24</b> , 102113	2017
37	The Exchange-Correlation Field Effect over the Magnetoacoustic-Gravitational Instability in Plasmas A. Rasheed, <b>M. Jamil</b> , Young-Dae Jung, A. Sahar and M. Asif	Z. Naturforsch .A	<b>72(10):</b> 915	2017
38	Streaming Jeans-Alfvén Instability in Quantum Magnetoplasmas <b>M. Jamil</b> , A. Rasheed, F. Hadi, G. Ali and M. Ayub	Z. Naturforsch .A	<b>72(11):</b> 1003	2017
39	Effect of magnetic quantization on ion acoustic waves ultra-relativistic dense plasma Asif Javed, A. Rasheed, <b>M. Jamil</b> , M. Siddique, and N. L. Tsintsadze	Phys. Plasmas	<b>24</b> , 112301	2017
40	Landau quantization effects on hole-acoustic instability in semiconductor plasmas P. Sumera, A. Rasheed, <b>M. Jamil</b> , M. Siddique, and F. Areeb	Phys. Plasmas	<b>24</b> , 122107	2017
41	Janus modes of Hasegawa plasma waves in a streaming and tempestuous plasma pillar Myoung-Jae Lee, Kyu-Sun Chung, <b>M. Jamil</b> , A. Rasheed, and Young-Dae Jung	Phys. Plasmas	<b>24</b> , 122111	2017
42	Oscillatory wake potential with exchange-correlation in plasmas Arroj A. Khan, I. Zeba, <b>M. Jamil</b> , and M. Asif	Phys. Plasmas	<b>24</b> , 123708	2017
43	Impact of Relativistic Electron Beam on Hole Acoustic Instability in Quantum Semiconductor Plasmas, M. Siddique, <b>M. Jamil</b> , A. Rasheed, F. Areeb, Asif Javed and P. Sumera	Z. Naturforsch .A	<b>73(2)</b> , 135	2018
44	Hole-cyclotron instability in semiconductor quantum plasmas F. Areeb, A. Rasheed, <b>M. Jamil</b> , M. Siddique, and P. Sumera	Phys. Plasmas	<b>25</b> , 012111	2018

45	Nonlinear beat excitation of low frequency wave in degenerate plasmas, Zahid Mir, M. Shahid, <b>M. Jamil</b> , A. Rasheed, and A. Shahbaz	Phys. Plasmas	<b>25</b> , 32120	2018
46	Langmuir instability in partially spin polarized bounded degenerate plasma, Z. Iqbal, <b>M. Jamil</b> , and G. Murtaza	Phys. Plasmas	<b>25</b> , 42106	2018
47	Waveguide instability in streaming e-p-i dense plasmas, <b>M. Jamil</b> , R. Ayesha, A. Rasheed, Z. Iqbal, and M. Asif	Phys. Plasmas	<b>25</b> , 62124	2018
48	Modulational and three wave decay instabilities in degenerate electron-ion dense plasmas, Ch. Rozina, S. Ali, H. A. Shah, <b>M. Jamil</b>	Phys. Plasmas	<b>25</b> , 092903	2018
49	Gravitational Drift Instability in Quantum Dusty Plasmas, <b>M. Jamil</b> , Zahid Mir, A. Rasheed and A. Hussain	Z. Naturforsch .A	<b>73(12)</b> , 1137	2018
50	Instability of beam driven electrostatic modes in semiconductor quantum magneto plasmas, F. Areeb, A. Rasheed, and <b>M. Jamil</b>	Phys. Plasmas	<b>25</b> , 102110	2018
51	Langmuir wave decays into O-mode and ICW in Earth's magnetosphere with inhomogeneous magnetic field M. Shahid, Sana Maehmood, Sobia Mehmood, Zahid Mir and <b>M. Jamil</b>	Phys. Plasmas	<b>25</b> , 112902	2018
52	Subsonic Potentials in Ultradense Plasmas Arroj A . Khan, I. Zeba and <b>M. Jamil</b>	Z. Naturforsch .A	<b>47(3)</b> , 207	2019
53	KdV acoustic structure with exchange-correlation potential in plasmas M. Siddique, A. Rasheed, <b>M. Jamil</b> , Asif Javed, and P. Sumera	The European Physical Journal Plus	<b>134</b> , 263	2019
54	Acoustic Instability with Dynamic Charging in Quantum Plasmas A . Rasheed, K. Zubia, A . Rubina and <b>M. Jamil</b>	Zeitschrift für Naturforschung A	<b>74(4)</b> , 333	2019
55	Karpman-Washimi magnetization in relativistic quantum plasmas <b>M. Jamil</b> , A. Rasheed, M. Usman, W. Arshad, M. Jawwad Saif , and Young-Dae Jung	Phys. Plasmas	<b>26</b> , 092110	2019
56	Nonlinear frequency shift of acoustic waves in semiconductor plasmas Zahid Mir , A. Rasheed, M. Shahid, Arroj. A. Khan, and <b>M. Jamil</b>	Phys. Plasmas	<b>26</b> , 112116	2019
57	Proton firehose instability: An interplay of thermal core and non-thermal halo protons M. Sarfraz, S. Noureen, G. Abbas, I. Zeba, <b>M. Jamil</b> , and S. S. A. Gillani	AIP, Advances	<b>9</b> , 125301	2019
58	Landau Quantised Modification of Rayleigh–Taylor Instability in Dense Plasmas M. Shahid, A . Rasheed, Misbah Kanwal and <b>M. Jamil</b>	Zeitschrift für Naturforschung A	<b>75(2)</b> , 113	2020
59	Landau quantization effects on hybrid waves in semiconductor plasmas	The European Physical Journal	<b>135</b> , 356	2020

	P. Sumera, A. Rasheed, F. Areeb, M. Siddique, Asif Javed, <b>M. Jamil</b>	Plus		
60	Dynamic charging effect on electromagnetic wave in low $\theta$ plasmas R. Ayesha, A. Rasheed, K. Zubia, N. Iqra, M. Sarfraz, <b>M. Jamil</b>	Astrophysics and Space Science	<b>365</b> , 133	2020
61	Oblique waveguide instability in quantum plasmas <b>M Jamil</b> , M Ilyas, A Rasheed, R Ayesha, M Asif and M Shahid	Physica Scripta	<b>95</b> , 115601	2020
62	Streaming effects on dust ion acoustic wave in dense quantized plasmas Zahid Mir , A. Rasheed, Arroj A. Khan , M. Asif, and <b>M. Jamil</b>	International Journal of Modern Physics B	<b>35(4)</b> , 2150049	2021
63	Low frequency hybrid instability in semi-relativistic GaAs plasmas Aneesa Iqbal , Muddasir Ali, <b>M. Jamil</b> and A. Rasheed	Physica Scripta	<b>96</b> , 125605	2021
64	Dispersive Features of Plasma Waves in Nano-Waveguide Systems R. Ayesha, A. Rasheed, M. Ali, I. Zeba, <b>M. Jamil</b>	Arabian Journal of Science and Engineering	<b>47</b> , 7473	2022
65	Magnetonics with Landau levels in GaAs semiconductor systems F. Areeb, I. Ahsan, A. Rasheed , P. Sumera , <b>M. Jamil</b>	Physica B: Condensed Matter	<b>663</b> , 414968	2023
66	Kelvin–Helmholtz instability in magnetically quantized dense plasmas A. Rasheed, A. Nazir, F. Areeb, B. Ramzan, K. Zubia, <b>M. Jamil</b>	Zeitschrift für Naturforschung A	<a href="https://doi.org/10.1515/zna-2023-0123">https://doi.org/10.1515/zna-2023-0123</a>	2023
67	Transonic plasma winds with cosmic-rays and waves, B Ramzan, Zahid Mir, A Rasheed and M Jamil, Phys. Scr. <b>98</b> (2023)125005 <a href="https://iopscience.iop.org/article/10.1088/1402-4896/ad07bf">https://iopscience.iop.org/article/10.1088/1402-4896/ad07bf</a>	Physica Scripta	<b>98</b> ,125005	2023
68	Continuous solutions of cosmic-rays and waves in astrophysical environments: K. Irshad , B. Ramzan , S. N. A. Qazi, F. Areeb, A. Rasheed & M. Jamil Scientific Reports <b>13</b> , (2023) 22850	Scientific Reports	<b>13</b> , 22850	2023
69	Magnetoacoustics and magnetic quantization of Fermi states in relativistic plasmas A. Iqbal, A. Rasheed, Areeb Fatima, Sumera Perveen, B. Ramzan and M. Jamil <i>Zeitschrift für Naturforschung A</i> , 2024. <a href="https://doi.org/10.1515/zna-2023-0224">https://doi.org/10.1515/zna-2023-0224</a>	Zeitschrift für Naturforschung A		2023

## **Taught Courses**

### **PhD Classes:**

- Advanced Statistical Physics
- Photonics Mesoscopic Systems
- Non Linear Optics
- Low Temperature Plasmas
- Advanced Plasmas

### **MS (M. Phil) Classes:**

- Mathematical Methods and Computational Physics
- Plasma Physics 1

### **BS (Hons.) Classes:**

- Electricity and Magnetism
- Computational Physics
- Nuclear Physics
- Modern Physics
- Applied Physics for Engineers (EE)
- Mathematical Methods in Physics
- Statistical Physics
- Basic Mathematics
- Boundary Value Problems
- Statistical Physics I
- Statistical Physics II
- Mechanics

### **Other Responsibilities:**

- Class Coordinator for BS(Hons.)

### **Journal Reviewer:**

- Physics of Plasmas
- Astrophysics and Space Science
- Zeitschrift für Naturforschung A
- The European Journal of Physics D
- Acta Acustica united with Acustica
- Indian Journal of Physics

- Acta Physica Polonica A
- Physica Scripta
- Plasma Physics and Control Fusion

## **Talks / Lectures delivered (Title/ Venue)**

- Fourier Transformation and its applications, Departmental seminar at **GC University Lahore**
- Drift wave instabilities in quantum dusty plasmas, theoretical group talk at **GC University Lahore** and **The University of Punjab Lahore**.
- Parametric decay of Alfvén wave into shear Alfvén wave and dust lower hybrid waves, theoretical group talk at **GC University Lahore** and **The University of Punjab Lahore**.
- Electromagnetic waves using two potential theory, theoretical group talk at **GC University Lahore** and **The University of Punjab Lahore**.
- Parametric decay of DIA wave in quantum plasmas, theoretical group talk at **GC University Lahore** and **The University of Punjab Lahore**.
- Parametric instability in complex plasmas, Conference talk at **University of Gujrat, Gujrat**.
- Study of collective interactions in complex plasmas, Departmental seminar at **GC University Lahore**
- Drift wave instability in quantum dusty plasmas, International Scientific Spring speaker at **NCP Islamabad**
- Parametric Interactions in complex Plasmas, International workshop on theoretical Plasmas at **COMSTech Islamabad**
- Exchange-correlation effect on Jeans Instability In Quantum Plasmas, International Scientific Spring, March 7-11, 2016 at NCP, Islamabad.
- Invited Talk, University of Gujrat, 2017
- Invited Talk at GC University Faisalabad 2017
- Invited Talk at GC University Lahore, 2017
- Invited Talk at Riphah International University, Lahore Campus, 2017
- Invited Talk at Riphah International University, Lahore Campus, 2018
- Invited Talk at GC University Lahore, 2018
- Invited Talk at GC University Lahore, 2019
- Invited Talk at Govt. Civil Lines College Lahore, 2020
- Invited Talk at 8<sup>th</sup> EuroAsia (online), Turkey, 2020

- Invited Talk at Vikram University (online), India, 2020
- Invited Talk at Riphah International University, Lahore Campus, 2021
- Invited Talk at Lahore College for Women University, Lahore, 2021
- Invited Talk at Riphah International University, Lahore Campus, 2021
- Invited Talk at EuroAsian Congress 8(online), Turkey, 2021
- Invited Talk at Lahore Garrison University(online), Lahore, 2021
- Invited Talk at National Centre for Physics(online), 2021
- Invited Talk at Govt. College for Women, Gulberg Lahore, 2021
- 
- Invited Talk at Govt. College Women University (online), Faisalabad, 2021
- Invited Talk at Govt. Civil Lines College Lahore, 2021
- Invited Talk at GC University Lahore, 2022
- Invited Talk at Govt. Civil Lines College Lahore, 2023
- Invited Talk at Riphah International University, Lahore Campus, 2023
- Talk at Govt. College Layyah, 2023

### **Conferences/Courses Attended:**

- 10<sup>th</sup> National Symposium on Frontiers in Physics, 11-14 January 2005 at GC University Lahore.
- Certificate of Lecture Course on Nuclear Data delivered by Dr. SYED M.QAIM (Prof. University of Cologne, Scientist at Research Center, Julich, Germany) 2005 at GC University Lahore.
- Salam Memorial Meeting Organized by National Centre for Mathematics, Salam Chair and Physics Department of GC University Lahore and the Pakistan Physics Society held in 21<sup>st</sup> November 2005.
- International Symposium on Contemporary Physics at NCP, Islamabad (2007).
- International Conference on “Research Methodology in Plasma Physics”, November 21-22, 2008 at University of Gujrat, Pakistan.

- 11<sup>th</sup> National Symposium on Frontiers in Physics, January 29-31, 2009 at GC University Lahore.
- 1<sup>st</sup> NCP Scientific Spring 2009, April 6<sup>th</sup> -9<sup>th</sup>, 2009 at NCP, QAU Islamabad Pakistan.
- 1<sup>st</sup> National Conference on Radiation, Particles and Matter, December 22-24, 2009 at CASP, GC University Lahore.
- International Scientific Spring – 2010, March 01 – 06, 2010 at NCP, QAU Islamabad Pakistan.
- Workshop on Astrophysics and Dense Plasmas, June 01-03, 2010, at NCP, QAU Islamabad Pakistan.
- Frontiers on Physics, February 02-04, 2011 at GCU, Lahore
- International Scientific Spring, March 01-04, 2011 at NCP, Islamabad.
- International workshop on plasmas Physics, March 5, 2011 at NCP, Islamabad.
- International Scientific Spring, March, 4-9, 2012 at NCP, Islamabad.
- International workshop on plasmas Physics, March, 10, 2012 at NCP, Islamabad.
- International workshop on plasmas Physics, Nov. 19-21, 2012 at COMSTech, Islamabad.
- National Seminar on nanotechnology, December, 6, 2012 at GCUF, Faisalabad.
- International Scientific Spring, March 11-15, 2013 at NCP, Islamabad.
- International workshop on plasmas Physics, March, 16, 2013 at NCP, Islamabad.
- Ist ICTP-NCP International College of Plasma Physics, Oct. 2013 Islamabad.
- International Scientific Spring, March 10-14, 2014 at NCP, Islamabad.
- International Scientific Spring, March 7-11, 2016 at NCP, Islamabad.