Dr. Ali Zaman

Assistant Professor, Physics Department, COMSATS University Islamabad (CUI)

Park Road, Tarlai Kalan, Islamabad 45550, Pakistan

Mobile & WhatsApp: +92 300 9820890

E-mail: [alizaman79@gmail.com](mailto:alizaman79@gmail.com) [ali.zaman@comsats.edu.pk](mailto:ali.zaman@comsats.edu.pk)

**Objective**

*To contribute, for the betterment and, in achieving the goals of the University/Institute through the best of my expertise in teaching, research and other activities*

**Personal**

|  |  |  |  |
| --- | --- | --- | --- |
| Father’s Name: | Badi-uz-Zaman | Nationality: | Pakistani |
| Gender: | Male | Place of Birth: | Leswa Neelum AJK |
| Religion: | Islam | Date of Birth: | 12 June 1979 |
| Marital Status: | Married | CNIC & NTN №: | 82201-2356859-9 |
| Physical Disability: | Right Leg Below Knee (RBK) Amputee/Artificial | | |

**Academics**

|  |  |
| --- | --- |
| **PhD** (Physics) | COMSATS University Islamabad (2009 – 2016) |
| **MS** (Physics) | COMSATS University Islamabad (2007 – 2009) |
| **MSc** (Physics) | Quaid-i-Azam University Islamabad (2003 – 2005) |
| **BSc** (Phy Math Chem) | University of the Punjab Lahore (1997 – 1999) |
| **FSc** (Pre-Engineering) | BISE Rawalpindi (1995 – 1997) |
| **Matric** (Science) | BISE Mirpur AJK (1993 – 1995) |

**Awards**

* MS leading to PhD Scholarship under HEC Indigenous5000 PhD Scholarship Scheme Batch-IV (2007)
* Research Productivity Awards 2013 and 2014, Awarded by COMSATS University Islamabad
* HEC approved PhD Supervisor since August 2017

**Scientific Memberships**

* Life Member of The Pakistan Physical Society (PPS) Pakistan (since 2012)
* Member of the ALICE Collaboration LHC CERN during PhD at COMSATS University Islamabad

**Languages** Urdu, English

**Computer Skills** OS: Windows & Linux, Word/Data Processing: MS Office (Word, PowerPoint, Excel), Origin, PDF, FORTRAN, MATLAB, PYTHIA, ROOT, HIJING Model etc.

**Teaching & Research Experience** (University level teaching since 2012, Research since 2009)

* **COMSATS University Islamabad (CUI) Islamabad** Assistant Professor (OG-II) 13-04-2022 to date

Responsibilities: Teaching Graduate/Undergraduate Courses, Supervising Graduate/Undergraduate Students Research Projects, Member of different Departmental Committees along with other assigned departmental duties

* **International Islamic University (IIU) Islamabad** Assistant Professor (IPFP) 01-02-2017 to 31-01-2018

Visiting Faculty (VF) Jul 2012 to Jan 2013, Feb 2016 to Jan 2017, Feb 2018 to Apr 2022

* **Riphah International University Islamabad** VF Feb 2016 to Jan 2017, Feb 2020 to Apr 2022
* **Fatima Jinnah Women University (FJWU) Rawalpindi** VF Feb 2020 to Mar 2022
* **Rawalpindi Women University (RWU) Rawalpindi** VF Nov 2021 to Apr 2022
* **Federal Urdu University of Arts Science and Technology (FUUAST) Islamabad** VF Sep 2016 to Mar 2017
* **Centre for Emerging Sciences, Engineering and Technology (CESET) Islamabad** VF Feb 2012 to Mar 2016
* Two years secondary level teaching, courses and academic administration (2005 – 2007)

Teaching Physics courses at graduate/undergraduate level, **frequently taught courses**: Quantum Mechanics, Statistical Mechanics, Classical Mechanics, Mathematical Methods of Physics, Electricity & Magnetism, Mechanics, Calculus, Linear Algebra, Applied Physics, Nuclear Physics, High Energy Physics, Particle Physics, Biological Physics, Electrodynamics etc.

**Research Activities** (Field of Interest: High Energy/Particle Physics, Nuclear/Radiation Physics)

**PhD & MS Research Work** Supervisor: Prof. Dr. Sc. Mais Suleymanov

PhD Thesis: Jet Production in Hadron-Hadron Collisions at High Energies (2011 – 2016)

MS Thesis: Jet Production in Hadron-Nucleus and Nucleus-Nucleus Collisions at Relativistic and Ultrarelativistic Energies (2008 – 2009)

**Research Grant/Project**

**Completed** as PI, Title: “Study of effects of the jets on some properties of secondary particles produced in high energy hadronic collisions”, Start-up Research Grant Program (SRGP), HEC, Project No. 1493, 2017-2018 (Rs. 215000/-) during IPFP at International Islamic University Islamabad

**In Progress**, Role: Co-PI (PI: Dr. Muhammad Rehman), Title: “Phenomenological Effects of Flavored Gauge Mediated Supersymmetry Breaking and Higgs Physics”, National Research Program for Universities (NRPU), HEC, Project No. 20-15867/NRPU/R&D/HEC/2021, (29-03-2022) 2024-2026, (Rs. 2788800/-) COMSATS University Islamabad

**Research Theses Supervision/Evaluation**

**MS/M.Phil. Physics Students**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sr. | Student Name | ID | Year | Supervisor/Co-Supervisor | University |
|  | Muhammad Safeer Khan | CMS # 16998 | 2017 | Co-Supervisor (Supervisor Dr Zafar Wazir) | Riphah International University Islamabad |
|  | Aqsa Farooq | CMS # 16743 | 2017 | Co-Supervisor (Supervisor Dr Zafar Wazir) | Riphah International University Islamabad |
|  | Mehwish Shabir | CMS # 16744 | 2017 | Co-Supervisor (Supervisor Dr Zafar Wazir) | Riphah International University Islamabad |
|  | Saqib Ameer | CMS # 21333 | 2019 | Co-Supervisor (Supervisor Dr Zafar Wazir) | Riphah International University Islamabad |
|  | Dillawar Khan | CMS # 20703 | 2019 | Co-Supervisor (Supervisor Dr Zafar Wazir) | Riphah International University Islamabad |
|  | Muddassir Hussain | AU ID 191619 | 2021 | Co-Supervisor (Supervisor Dr Shakeel Mahmood) | Air University Islamabad |
|  | Saira Khalid | 2015-BS-Phy-20 | 2024 | Supervisor | Ghazi University Dera Ghazi Khan |
|  | Muhammad Waseem Shahzad | 2022-GU-0012 | 2024 | Supervisor | Ghazi University Dera Ghazi Khan |
|  | Noreen Sultana Khadim | 2022-GU-0020 | 2024 | Supervisor | Ghazi University Dera Ghazi Khan |
|  | Asfa Siddique | 2022-GU-0021 | 2024 | Supervisor | Ghazi University Dera Ghazi Khan |
|  | Sehrish Afzal | 2022-GU-2009 | 2024 | Supervisor | Ghazi University Dera Ghazi Khan |
|  | Abdullah Nawaz | FA22-RPH-001 | 2024 | Supervisor (Co-Supervisor Dr Muhammad Usman IST) | COMSATS University Islamabad |
|  | Saman Nawaz | FA22-RPH-041 | 2024 | Supervisor | COMSATS University Islamabad |
|  | Hammad Shaukat | SP24-RPH-012 | 2025 | Supervisor | COMSATS University Islamabad |
|  | Khadija Nawaz | SP24-RPH-015 | 2025 | Supervisor | COMSATS University Islamabad |
|  | Mohib Ullah | SP24-RPH-019 | 2025 | Supervisor | COMSATS University Islamabad |
|  | Kainat Fatima | FA24-RPH-017 | 2025 | Supervisor | COMSATS University Islamabad |
|  | Syeda Rameesha Hamdani | FA24-RPH-034 | 2025 | Supervisor | COMSATS University Islamabad |
|  |  |  |  |  |  |

**BS Physics FYP Students**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sr. | Student Name | ID | Year | Supervisor/Co-Supervisor | University |
|  | Muhammad Zakir | SP20-BPH-045 | 2024 | Supervisor | COMSATS University Islamabad |
|  | Zohaib Mearaj | SP20-BPH-073 | 2024 | Supervisor | COMSATS University Islamabad |
|  | Noman Rauf | SP20-BPH-048 | 2024 | Supervisor | COMSATS University Islamabad |
|  | Muhammad Ali Hussnain | SP21-BPH-039 | 2024 | Supervisor | COMSATS University Islamabad |
|  | Misbah-ur-Rahman | FA21-BPH-027 | 2025 | Supervisor | COMSATS University Islamabad |
|  | Bakhtayar Zafar | SP21-BPH-043 | 2025 | Supervisor | COMSATS University Islamabad |
|  | Maryam Ishtiaq | SP21-BPH-035 | 2025 | Supervisor | COMSATS University Islamabad |
|  | Fatima Akbar | SP22- BPH-014 | 2025 | Co-Supervisor (Supervisor Dr. Siraj-ul-Islam Ahmad) | COMSATS University Islamabad |

**Evaluation**: About 31 BS & MS/M.Phil. Physics theses/reports evaluated as external examiner at various universities since 2017

**Research reviewing activities**

Reviewer for scientific journals:

* The Nucleus (since 2016)
* International Journal of Theoretical Physics (since 2017)
* Modern Physics Letters A (since 2018)
* Iranian Journal of Science and Technology, Transaction A, Science (since 2020)

**Publications (Journals Articles)**

1. B. Z. Belashev, M. K. Suleymanov, S. Vokal, J. Vrlakova, M. Ajaz, Ali Zaman, K. H. Khan, Z. Wazir, “Analysis of Shower Particle Pseudorapidity Spectra in Interactions of Relativistic Au and Pb Ions with Emulsion Nuclei”, Chinese Physics C CPC(HEP & NP), Vol. **35** No. 12 (2011) 1095-1099 (5 pages) Published December 2011 IF: 3.6 ISSN (online): 2058-6132 ISSN (print): 1674-1137 DOI: <https://doi.org/10.1088/1674-1137/35/12/003> Publisher: IOP Publishing
2. M. Ajaz, M. K. Suleymanov, O. B. Abdinov, Ali Zaman, K. H. Khan, Z. Wazir, Sh. Khalilova, “Nuclear Transparency Effect in the Strongly Interacting Matter”, Azerbaijan Journal of Physics Fizika, Vol. **XVII** No. 3 (2011) 17-20 (4 pages) Published October 2011 ISSN: 1028-8546 web: [physics.gov.az/Dom/2011/v3article/AJP\_Fizika\_03\_2011\_en.pdf](http://www.physics.gov.az/Dom/2011/v3article/AJP_Fizika_03_2011_en.pdf) Publisher: Institute of Physics, Ministry of Science and Education, Republic of Azerbaijan
3. M. Ajaz, M. K. Suleymanov, K. H. Khan and Ali Zaman, “Searching For the Properties of Nuclear Matter Using Proton-Carbon and Deuteron-Carbon Collisions at 4.2 *A* GeV/c”, International Journal of Modern Physics E, Vol. **21** No. 12 (2012) 1250095 (9 pages) Published 5 November 2012 IF: 1.174 ISSN (print): 0218-3013  ISSN (online): 1793-6608 DOI: <https://doi.org/10.1142/S0218301312500954> Publisher: World Scientific
4. M. Ajaz, M. K. Suleymanov, K. H. Khan, Ali Zaman, “Study of the behavior of the nuclear modification factor in freeze-out state”, Chinese Physics C, Vol. **37** No. 2 (2013) 024101 (4 pages) Published February 2013 IF: 3.6 ISSN (online): 2058-6132 ISSN (print): 1674-1137 DOI: <https://doi.org/10.1088/1674-1137/37/2/024101> Publisher: IOP Publishing
5. Muhammad Ajaz, Mais K Suleymanov, Kamal Hussain Khan and Ali Zaman, “Nuclear transparency effect of π--mesons in p+12C- and d+12C- interactions at 4.2 A GeV/c”, Journal of Physics G: Nuclear and Particle Physics, Vol. **40** (2013) 055101 (8 pages) Published 21 March 2013 IF: 3.045 ISSN (online): 1361-6471 ISSN (print): 0954-3899 DOI: <https://doi.org/10.1088/0954-3899/40/5/055101> Publisher: IOP Publishing
6. M. Ajaz, M. K. Suleymanov, K. H. Khan, Ali Zaman, H. Younis and A. Rahman, “Study of some characteristics of protons using interactions of light nuclei”, Modern Physics Letters A, Vol. **28** No. 37 (2013) 1350175 (7 pages) Published 15 November 2013 IF: 2.006 ISSN (print): 0217-7323  ISSN (online): 1793-6632 DOI: <https://doi.org/10.1142/S0217732313501757> Publisher: World Scientific
7. K. H. Khan, M. K. Suleymanov, M. Ajaz, Ali Zaman and Sh. Khalilova, “Light nuclei formation in 12CC collisions at 4.2 A GeV/c”, Modern Physics Letters A, Vol. **29** No. 12 (2014) 1450063 (8 pages) Published 14 April 2014 IF: 2.006 ISSN (print): 0217-7323  ISSN (online): 1793-6632 DOI: <https://doi.org/10.1142/S0217732314500631> Publisher: World Scientific
8. Ali Zaman, Mais Suleymanov, Muhammad Ajaz and Kamal Hussain Khan, “On influences of the jet production to charged particles multiplicity distribution in pp-collisions at Tevatron energies”, International Journal of Modern Physics E, Vol. **23** No. 5 (2014) 1450029 (9 pages) Published 14 May 2014 IF: 1.174 ISSN (print): 0218-3013   ISSN (online): 1793-6608 DOI: <https://doi.org/10.1142/S0218301314500293> Publisher: World Scientific
9. Ali Zaman, Mais Suleymanov, Muhammad Ajaz and Kamal Hussain Khan, “Effect of the Jet Production on Pseudorapidity, Transverse Momentum and Transverse Mass Distributions of Charged Particles Produced i*n pp*-Collisions at Tevatron Energy”, Chinese Physics C, Vol**. 39** No. 7 (2015) 073001 (6 pages) Published 05 July 2015 IF: 3.6 ISSN (online): 2058-6132 ISSN (print): 1674-1137 DOI: <https://doi.org/10.1088/1674-1137/39/7/073001> Publisher: IOP Publishing
10. M. Ajaz, M. K. Suleymanov, K. H. Khan, Ali Zaman, H. Younis, Z. Wazir and Bahar Ali, “Average characteristic of π--mesons in HeC and CC interactions at high energies”, International Journal of Modern Physics E, Vol. **25** No. 3 (2016) 1650019 (9 pages) Published 7 March 2016 IF: 1.174 ISSN (print): 0218-3013  ISSN (online): 1793-6608 DOI: <https://doi.org/10.1142/S0218301316500191> Publisher: World Scientific
11. Kamal Hussain Khan, M. K. Suleymanov, M. Ajaz, Ali Zaman, H. Younis, “The study of light nuclei production in different interactions at 4.2 A GeV/c”, Canadian Journal of Physics, Vol. **94** No. 7 (2016) 693-696 (4 pages) Published 19 April 2016 IF: 1.032 ISSN (print): 0008-4204 ISSN (electronic): 1208-6045 DOI: <https://doi.org/10.1139/cjp-2015-0675> Publisher: Canadian Science Publishing
12. Akhtar Iqbal, Kh. K. Olimov, M. Ahmad, Ali Zaman, Obaidullah Jan, B. S. Yuldashev, “Centrality and rapidity dependences of negative pions in He-C collisions at 4.2 A GeV/c”, Modern Physics Letters A, Vol. **34** No. 12 (2019) 1950092 (19 pages) Published 25 March 2019 IF: 2.006 ISSN (print): 0217-7323   ISSN (online): 1793-6632 DOI: <https://doi.org/10.1142/S0217732319500925> Publisher: World Scientific
13. A R Gilani, Z Wazir, M K Suleymanov, S Kanwal, S M Aslam and Ali Zaman, “Analysis of transverse momentum distributions for charged particles produced in CC interactions at 4.2 A GeV/c”, Modern Physics Letters A, Vol. **34** No. 23 (2019) 1950187 (7 pages) Published 04 June 2019 IF: 2.006 ISSN (print): 0217-7323 ISSN (online): 1793-6632 DOI: <https://doi.org/10.1142/S0217732319501876> Publisher: World Scientific
14. R. Khan, M. Ajaz, Y. Ali, G. Khan, H. Younis, Z. Wazir, Ali Zaman, A. Khan, “Model predictions of charged-particle azimuthal distributions and forward-backward correlations in pp interactions at 900 GeV”, Communications in Theoretical Physics, Vol. **71** No. 10 (2019) 1172-1178 (7 pages) Published October 2019 IF: 1.968 Online ISSN: 1572-9494 Print ISSN: 0253-6102 DOI: <https://doi.org/10.1088/0253-6102/71/10/1172> Publisher: IOP Publishing
15. Imran Khan, Alamgir Khan, Dil Faraz Khan, Abdur Rehman, Ali Zaman, “Analysis of spectral temperature of participant protons in p+12C interactions at 4.2 GeV/c using UrQMD model”, International Journal of Theoretical Physics, Vol. **58** No. 10 (2019) 3535-3553 (19 pages) Published 02 August 2019 IF: 1.708 ISSN (online): 1572-9575 ISSN (print): 0020-7748 DOI: <https://doi.org/10.1007/s10773-019-04219-z> Publisher: Springer
16. M. Ajaz, R. Khan, M. Bilal, Y. Ali, G. Khan, H. Younis, K. H. Khan, Z. Wazir, Ali Zaman, A. Khan, “Model predictions of particles ratios in pp collisions at √s = 900 GeV”, Indian Journal of Physics, Vol. **94** No. 5 (2020) 719-724 (6 pages) Published 21 May 2019 IF: 1.947 ISSN (online): 0974-9845 ISSN (print): 0973-1458 DOI: <https://doi.org/10.1007/s12648-019-01504-9> Publisher: Springer
17. Imran Khan, Abdur Rehman and Ali Zaman, “Spectral temperature of π− mesons in proton-carbon interactions at 4.2 GeV/c in the framework of UrQMD model”, Modern Physics Letters A, Vol. **35** No. 10 (2020) 2050066 (17 pages) Published 3 January 2020 IF: 2.006 ISSN (print): 0217-7323   ISSN (online): 1793-6632 DOI: <https://doi.org/10.1142/S0217732320500662> Publisher: World Scientific
18. Imran Khan, Nabeela Feroz, Ali Zaman, Naseebullah, “Analysis of positive pions obtained in *d* + C collisions at 4.2 *A* GeV/*c*”, International Journal of Modern Physics E, Vol. **29** No. 4 (2020) 2050041 (16 pages) Published: 28 July 2020 IF: 1.174 ISSN (print): 0218-3013   ISSN (online): 1793-6608 DOI: <https://doi.org/10.1142/S021830132050041X> Publisher: World Scientific
19. Imran Khan, Sifat Ullah Khan, Ali Zaman, Naseebullah, “Characteristics of positive pions produced in *p+*C collisions at 4.2 GeV/*c*”, Iranian Journal of Science and Technology, Transactions A: Science (Iran J Sci Technol Trans Sci), Vol. **44** No. 4 (2020) 1177–1189 (13 pages) Published: 04 July 2020, IF: 1.194 ISSN (online): 2364-1819 ISSN (print): 1028-6276 DOI: <https://doi.org/10.1007/s40995-020-00910-7> Publisher: Springer
20. Imran Khan, Mudasir Iqbal, Ali Zaman, Naseebullah, “Characteristics of negative pions produced in dC collisions at 4.2 GeV/c per nucleon”, Indian Journal of Physics, Vol. **96** No. 4 (2022) 1259-1268 (10 pages) Published 03 April 2021 IF: 1.947 ISSN (online): 0974-9845 ISSN (print): 0973-1458 DOI: <https://doi.org/10.1007/s12648-021-02066-5> Publisher: Springer
21. Ali Zaman, Zafar Wazir, Saqib Ameer, Mais Suleymanov, Imran Khan, “Jet dependence of multiplicity of charged particles produced in pp, pPb and dAu collisions at high energy”, International Journal of Theoretical Physics, Vol. **62** No. 4 (2023) 79 (8 pages) Published 30 March 2023, IF: 1.708 ISSN (online): 1572-9575 ISSN (print): 0020-7748 DOI: <https://doi.org/10.1007/s10773-023-05343-7> Publisher: Springer
22. Abdur Rehman, Imran Khan, Naseebullah, Ali Zaman, Kh. K. Olimov, Akhtar Iqbal, Mudasir Iqbal, “Analysis of charged hadrons’ transverse momentum distributions in p+Pb and Xe+Xe collisions at LHC energies”, Physics Scripta, Vol. **99** No. 3 (2024) 035022 (7 pages) Published 15 February 2024, IF: 2.9 ISSN (online): 1402-4896 ISSN (print): 0031-8949 DOI: <https://doi.org/10.1088/1402-4896/ad25b4> Publisher: IOP Publishing
23. Alamgir Khan, Uzma Tabassam, Yasir Ali, Ali Zaman, “Analysis of pT spectra for φ(1020)0 mesons in Cu−Au collisions at 200 GeV, using PYTHIA and Tsallis function”, Chinese Journal of Physics, Vol. **89** No. 3 (2024) 227-235 (9 pages) Published 02 March 2024 IF: 5.0 ISSN (online): 2309-9097 ISSN (print): 0577-9073 DOI: <https://doi.org/10.1016/j.cjph.2024.03.002> Publisher: Elsevier
24. Mavia Anjum, Naila Siddique, Hannan Younis, Yasir Faiz, Ali Zaman, Mushtaq Ahmad, Munib Ahmed Shafique, Mahnoor, “Assessment of Natural Radioactivity in Spring Water and Radiation Shielding Properties of Soil from a Tourist Hub in Outer Himalayas”, Journal of Radioanalytical and Nuclear Chemistry, Vol. **333** No. 10 (2024) 4715-4732 (18 pages) Published online 20 August 2024 IF: 1.5 ISSN (online): 1588-2780 ISSN (print): 0236-5731 DOI: <https://doi.org/10.1007/s10967-024-09695-0> Publisher: Springer
25. Waqas Ahmad, Ihsan Ullah, Ali Zaman, Imran Khan, Akhtar Iqbal, Abdul Qudus, Sana Ullah, Naseebullah, Muhammad Ramazan, "Analysis of transverse momentum spectra of protons, deuterons, and tritons in symmetric heavy-ion collisions at √sNN = 200 GeV at the RHIC", Chinese Physics C, Vol**. 49** No. 1 (2025) 014104 (15 pages) Published online 06 October 2024 IF: 3.6 ISSN (online): 2058-6132 ISSN (print): 1674-1137 DOI: <https://doi.org/10.1088/1674-1137/ad83a7> Publisher: IOP Publishing
26. Imran Khan, Abdul Qudus, Ali Zaman, "Centrality versus Temperature of Protons, Deuterons, and Tritons in Au+Au collisions at 54.4 GeV", Arabian Journal for Science and Engineering (Arab J Sci Eng), Vol**. xx** No. x (2024) xxxxx (10 pages) Published online 23 October 2024 IF: 2.6 ISSN (online): 2191-4281 ISSN (print): 2193-567X DOI: <https://doi.org/10.1007/s13369-024-09704-0> Publisher: Springer
27. Alamgir Khan, Yasir Ali, Taimoor Khurshid, Uzma Tabassam, Ali Zaman, "Monte-Carlo models predictions for centrality dependence of K∗(892)0 mesons in Au−Au and Cu−Cu Collisions at RHIC energies”, The European Physical Journal Plus, Vol**. 139** No. 12 (2024) 1077 (11 pages) Published online 09 December 2024 IF: 2.8 ISSN (online): 2190-5444 DOI: <https://doi.org/10.1140/epjp/s13360-024-05877-7> Publisher: Springer
28. Alamgir Khan, Yasir Ali, Uzma Tabassam, Taimoor Khurshid, Ali Zaman, “Strange meson production in Au-Au and Cu-Cu Collisions at RHIC energies”, International Journal of Theoretical Physics, Vol. **64** No. x (2025) 91 (13 pages) Published online 27 March 2025, IF: 1.708 ISSN (online): 1572-9575 ISSN (print): 0020-7748 DOI: <https://doi.org/10.1007/s10773-025-05959-x> Publisher: Springer
29. Abdur Rehman, Imran Khan, Ali Zaman, Maimoona Khan, Abdul Qudus, Naseebullah, Nabeela Feroz, Zahir Jamil, "Mass, Charge and Centrality Dependency of Freeze Out Parameters in Xe+Xe Collisions at 5.44 TeV", Modern Physics Letters A, Vol. **40** No. 19 & 20 (2025) 2550063 (33 pages) Published 9 May 2025 IF: 2.006 ISSN (print): 0217-7323   ISSN (online): 1793-6632 DOI: <https://doi.org/10.1142/S0217732325500634> Publisher: World Scientific
30. Uzma Tabassam, Yasir Ali, Ali Zaman, “Analysis of pT spectra of Σ baryon by using Tsallis distribution function in pp, p-Pb, and Pb-Pb collisions at LHC energies”, Modern Physics Letters A, Vol. **xx** No. xx (2025) 2550195 (9 pages) Accepted 14 September 2025 IF: 2.006 ISSN (print): 0217-7323   ISSN (online): 1793-6632 DOI: <https://doi.org/10.1142/S0217732325501950> Publisher: World Scientific
31. Ali Zaman, Saman Nawaz, Yasir Ali, Uzma Tabassam, Hammad Shaukat, Imran Khan, Shakeel Mahmood, “Analyzing the Transverse Momentum of Pions, Kaons and Protons Produced in pp Collisions at 7 and 13 TeV”, Physics of Atomic Nuclei, Submitted June 2025
32. Yasir Ali, Tayyeb Aliyas, Ali Zaman, Alamgir Khan, " J/ψ production in Pb-Pb collisions at midrapidity and forward rapidity at LHC energies ", Chinese Physics C, Submitted June 2025
33. Abdul Qudus, Imran Khan, Ali Zaman, Naseebullah, “Analysis of Thermodynamic Signatures and Phase Transition in p-p Collisions at √sNN = 62.4 GeV to 13 TeV”, Physical Review C, Submitted August 2025

**Conference Proceedings**

1. M. K. Suleymanov, M. Ajaz, Ali Zaman, K. H. Khan, Z. Wazir, “High Density and/or High Temperature Nuclear Matter may be a Source of High Energy Cosmic Particles”, Proceedings of Science PoS (EPS-HEP 2009) (2009) 406 (2 pages) DOI: <https://doi.org/10.22323/1.084.0406> Publisher: Proceedings of Science SISSA Italy
2. M. Ajaz, M. K. Suleymanov, K. H. Khan, Ali Zaman**,** Sh. Khalilova, “Nuclear transparency effect in proton and deuteron induced interactions with carbon nuclei”, Proceedings of Science PoS (Baldin ISHEPP XXI) (2012) 052 (9 pages) DOI: <https://doi.org/10.22323/1.173.0052> Publisher: Proceedings of Science SISSA Italy
3. K. H. Khan, M. K. Suleymanov, M. Ajaz, Ali Zaman**,** Sh. Khalilova, “Observation of light nuclei formation as nuclear coalescence in CC-interactions at 4.2 A GeV/c”, Proceedings of Science PoS (Baldin ISHEPP XXI) (2012) 045 (8 pages) DOI: <https://doi.org/10.22323/1.173.0045> Publisher: Proceedings of Science SISSA Italy
4. M. K. Suleymanov, B. Z. Belashev, S. Vokal, A. S. Vodopianov, J. Vrláková, O. B. Abdinov, M. Ajaz, Ali Zaman, K. H. Khan, Sh. Khalilova, “Pseudorapidity spectra of secondary particles emitted in the relativistic nucleus-nucleus collisions”, Proceedings of Science PoS (Baldin ISHEPP XXI) (2012) 043 (11 pages) DOI: <https://doi.org/10.22323/1.173.0043> Publisher: Proceedings of Science, SISSA Italy
5. M. K. Suleymanov, R. G. Nazmitdinov, E. I. Shahaliev, O. B. Abdinov, M. Ajaz, Ali Zaman, K. H. Khan, Z. Wazir, “Applying a new method for analyzing experimental data on nuclear reactions at high energies”, Bulletin of the Russian Academy of Sciences: Physics Vol. **76** No. 10 (2012) 1089-1092 (4 pages) ISSN (online): 1934-9432 ISSN (print): 1062-8738 DOI: <https://doi.org/10.3103/S106287381204034X> Publisher: Springer

**MS Thesis published as book**

1. Ali Zaman, “Jets in High Energy Hadronic Collisions: Jet Production in Hadron-Nucleus and Nucleus-Nucleus Collisions at Relativistic and Ultrarelativistic Energies”, LAP Lambert Academic Publishing GmbH & Co. KG, Germany, (2011) ISBN # 9783843380935

Publications with the ALICE Collaboration LHC CERN Switzerland (more than 150)

List available at: <http://aliceinfo.cern.ch/ArtSubmission/publications>

**Conferences/Seminars/Workshops Participated**

1. One Day Workshop on Quantum Computing, Air University Islamabad, July 11, 2025
2. 9th Pakistan Young Physicists Tournament, The Black Hole, Islamabad, Jan 4-5, 2025 (Jury)
3. 7th International Workshop on Tracking Detectors in High Energy Physics, NCP Islamabad, Oct 22-24, 2024
4. 7th Punjab Young Physicists Tournament, LGS Paragon Lahore, Sep 7-8, 2024 (Jury)
5. CERN70 & Pakistan: Seminar on CERN70 in Pakistan, PAEC/NCP Islamabad, June 24, 2024
6. Workshop on CERN@70: Inspiring the Future, COMSATS university Islamabad, May 7, 2024
7. Lean Six Sigma White Belt (LSSWB) Certification, COMSATS university Islamabad, Apr 26, 2024
8. APS Satellite March Meeting, NCP Islamabad, Mar 6, 2024
9. International School on Physics & Allied Disciplines (ISPAD) – 2024, NCP Islamabad, Mar 4-8, 2024
10. 8th Pakistan Young Physicists Tournament, University of Lahore, Lahore Campus, Mar 2-3, 2024 (Jury)
11. 6th Punjab Young Physicists Tournament, University of Lahore, Lahore Campus, Nov 18-19, 2023 (Jury)
12. 2nd International Conference of Sciences "Revamped Scientific Outlook of 21st Century 2023", Rawalpindi Women University, Rawalpindi, Nov 15, 2023 (Invited Speaker)
13. 12th School on LHC Physics, NCP Islamabad, Aug 21 – Sep 01, 2023
14. 48th International Nathiagali Summer College, Nathiagali, July 20-22, 2023
15. 7th Pakistan Young Physicists Tournament, COMSATS University Islamabad, Feb 18-19, 2023 (Jury)
16. 5th Punjab Young Physicists Tournament, CUI Lahore Campus, Nov 12-13, 2022(Jury)
17. 3-Day Workshop on Enhancing Teaching Excellence, COMSATS University Islamabad, Jul 18-20, 2022
18. 6th Pakistan Young Physicists Tournament, FJWU Rawalpindi, Mar 17-18, 2022 (Jury)
19. 4th Punjab Young Physicists Tournament, Riphah University Lahore, Nov 27-28, 2021 (Jury)
20. 4th Pakistan Young Physicists Tournament, FJWU Rawalpindi, Jan 25-26, 2020 (Jury)
21. 2nd Punjab Young Physicists Tournament, Riphah University Lahore, Oct 19-20, 2019 (Jury)
22. One day workshop on Preparation for LHC Run III, NCP Islamabad, Oct 16, 2019
23. 3rd Pakistan Young Physicists Tournament, FJWU Rawalpindi, Feb 23-24, 2019 (Jury)
24. Talent Grooming Workshop for Unemployed PhD Scholars, HEC Islamabad, Nov 26-27, 2018
25. 2nd Pakistan Young Physicists Tournament, Pak-Turk Islamabad, Jan 20-21, 2018 (Jury)
26. 42nd International Nathiagali Summer College, NCP Islamabad, July 17-29, 2017
27. First Pakistan Young Physicists Tournament, Pak-Turk Islamabad, April 1-2, 2017 (Jury)
28. International Scientific School (ISS-2017), NCP Islamabad, Mar 13-17, 2017
29. Seminar on Pakistan's Collaboration with CERN and SESAME, PINSTECH Islamabad, Nov 14-15, 2016
30. 41st International Nathiagali Summer College, NCP Islamabad, July 18-30, 2016
31. International Scientific Spring (ISS-2016), NCP Islamabad, Mar 7-11, 2016
32. National Workshop on Physics Education, Challenges & Prospects, NCP Islamabad, Nov 26-27, 2015
33. Workshop on Physics and Technology of Accelerators, NCP Islamabad, Nov 23, 2015
34. 14th Regional Conference on Mathematical Physics, QAU Islamabad, Nov 9-14, 2015
35. International Symposium on Physics Beyond the Standard Model, NCP Islamabad, Oct 5-9, 2015
36. Workshop on Prospects of Collaborative Research with CERN, NCP Islamabad, Sep 3, 2015
37. Workshop on Tracking Detectors in High Energy Physics, NCP Islamabad, May 25-27, 2015
38. ICTP-NCP School on LHC Physics, NCP Islamabad, November 17-28, 2014
39. Seminar on Phys. & App. of Accelerators & Synchrotron Sources, PINSTECH Islamabad, May 13-15, 2014
40. 6th Winter Meeting on Particles and Fields (WMPF-2014), NCP Islamabad, April 14-18, 2014
41. 5th International Meeting on Particles and Fields, CHEP Punjab University, Lahore, March 25-28, 2013
42. 5th International Scientific Spring ISS-2013, NCP Islamabad, March 11-15, 2013
43. 13th National Symposium on Frontiers in Physics (PPS), University of Peshawar, December 19-21, 2012
44. First Asia-Europe-Pacific School of High-Energy Physics (AEPSHEP 2012), Fukuoka, Japan, Oct 14-27, 2012 (Group Project Presentation: Search for the Rare Decays at LHCb)
45. 37th International Nathiagali Summer College, Nathiagali, June 25 - July 7, 2012
46. 4th International Scientific Spring ISS-2012, NCP Islamabad, March 5-9, 2012
47. Workshop on Climate Change & Sustainable Resources Management of Water, CIIT(CUI), Nov 22-24, 2011
48. Pakistan Physical Society: Conference on Contemporary Physics, University of Gujrat, Nov 15-17, 2011
49. 36th International Nathiagali Summer College, NCP Islamabad, June 27 – July 8, 2011
50. Second School on LHC Physics, NCP Islamabad, April 25 – May 4, 2011
51. Intl. Seminar on Nuclear Safety and Security Challenges in 21st Century, NCP Islamabad, Apr 21-23, 2011
52. National Symposium on Quantum Information Processing, CIIT(CUI) Islamabad, Apr 9, 2011
53. 3rd International Scientific Spring ISS-2011, NCP Islamabad, March 1-4, 2011
54. 2nd International Scientific Spring ISS-2010, NCP Islamabad, March 1-5, 2010
55. First School on LHC Physics, NCP Islamabad, October 12-30, 2009 (Lab Demonstration – HIJING MC Model)
56. First CIIT Science Conference BICMAPE-2009, CIIT(CUI) Abbottabad, July 28-29, 2009 (Poster Presentation)
57. Workshop on Seismicity Seismotectonic Neotectonics & Earthquake Forecasting in Northern Pakistan, NCP Islamabad, Jul 20-24, 2009
58. First National Winter Meeting on Particles and Fields, QAU Islamabad, December 22-24, 2008
59. International Workshop on COMSATS-CERN Collaboration, CIIT(CUI) Islamabad, Aug 26, 2008 (Organizer)

**References**

Prof. Dr. Sc. Mais Suleymanov

Professor, Department of Physics

Director, Center for Organization of Science Activity and Innovation

Baku State University (BSU) Baku Azerbaijan

E-mail: [mais.suleymanov@bsu.edu.az](mailto:mais.suleymanov@bsu.edu.az) Contact: +99 450 531 43 88

Prof. Dr. Muhammad Anis-ur-Rehman

Professor & HoD

Department of Physics COMSATS University Islamabad Pakistan

E-mail: [marehman@comsats.edu.pk](mailto:marehman@comsats.edu.pk) Mobile: +92 321 5163059

Prof. Dr. Farida Tahir

Department of Physics COMSATS University Islamabad Pakistan

E-mail: [farida\_tahir@comsats.edu.pk](mailto:farida_tahir@comsats.edu.pkM) Mobile: +92 331 5336900

Prof. Dr. Muhammad Mumtaz

Professor

Department of Physics International Islamic University Islamabad Pakistan

E-mail: [mmumtaz@iiu.edu.pk](mailto:mmumtaz@iiu.edu.pk) Mobile: +92 333 5101074

Dr. Waqar Mahmood

Associate Professor

Department of Physics Rawalpindi Women University Rawalpindi Pakistan

E-mail: [waqar00923335167800@gmail.com](mailto:waqar00923335167800@gmail.com) Mobile: +92 333 5167800

Dr. Muhammad Farooq Nasir

Associate Professor & HoD

Department of Physics Riphah International University I-14 Islamabad Pakistan

E-mail: [farooq.nasir@riphah.edu.pk](mailto:farooq.nasir@riphah.edu.pk) Mobile: +92 333 5157531

Prof. Dr. Muhammad Ajaz

Professor

Department of Physics Abdul Wali Khan University Mardan Pakistan

E-mail: [ajaz@awkum.edu.pk](mailto:ajaz@awkum.edu.pk) Mobile: +92 345 9365656