

# Atia Atiq, Ph.D.



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**Permanent Address:** House No. 577/1, Sadiq colony, Street No. 1, Ahmadpur Road, Bahawalpur.  
**Present Address:** Department of Physics, University of Education, Lahore, Multan Campus, Boson Road Multan.  
**Research Profile:** <https://scholar.google.com/citations?hl=en&user=Fs6YTEoAAAAJ>

## ❖ Personal statement

I am enthusiastic to do innovative work individually and in a team. I am a target-oriented, flexible, and friendly person with my colleagues, which helps me to achieve my goals. It is always an immense pleasure for me to meet new people and talk about science, adventures, new challenges, and history. I am adaptable to new conditions, research environments, and different cultures. I owe strong communication skills and the ability to work effectively with diverse groups of people, including researchers, technicians, and other staff. I learned strong organizational skills with modern tools.

## ❖ Employment/Work Experience

### • Tenure Track Assistant Professor (Sep. 2020 to present)

Department of Physics, University of Education, Lahore, Pakistan.

(I taught Physics to undergraduate and graduate students and got more than 95% instructor evaluation scores in my sections, besides that, I supervised 10 Senior Bachelor students and co-supervising one M.Phil. student for his projects and degrees)

### • Visiting Researcher (Volunteer) (Aug. 2019 to Jul.2020)

Institute of Molecules and Materials, Radboud University, The Netherlands

I was involved in a project for peptide-silver nanocomposites for antibacterial applications, and I took several short courses for interpersonal skills. (During this period, one research article as corresponding author, and two review articles as co-authors were published in reputed journals)

### • Lecturer of Physics (Apr. 2013 to Jan. 2018)

University of Central Punjab, Lahore, Bahawalpur Campus, Pakistan.

(I taught Physics to undergraduate students)

## ❖ Education

### • Ph.D. (Physics) (2015- 2019)

**Research Topic:** *Evaluation of Dosimetric Properties in External Beam Radiotherapy.*

*Advisor: Prof. Saeed Ahmed Buzdar (IUB)*

Department of Physics, The Islamia University of Bahawalpur (IUB), Pakistan.

### • M. Phil (Medical Physics) (2011-2013) CGPA: 3.76/4.0

*Thesis Title: Computational Tool for Efficient Determination of Tissue Air Ratio (TAR) in Gamma Beam Radiotherapy.*

Department of Physics, The Islamia University of Bahawalpur, Pakistan

- **M. Sc. (Physics)** (2007 -2009) CGPA: 3.73/4.0

Department of Physics, The Islamia University of Bahawalpur, Pakistan

### ❖ Research Interests

My research interests focus on the biophysics of short peptides, and their self-assembled nanomaterials for anticancer and antibacterial applications. Moreover, I got an experience in radiotherapy treatment planning, photon dose calculation, and gel dosimetry during my Ph.D.

Nanomaterials Synthesis and Characterization, Radiotherapy, Treatment Planning, Physics of Medical Imaging, Radiation Dosimetry, Biophysics, Gel Dosimetry

### ❖ Research Publications

1. Altaf S, Buzdar SA, Salahudin S, Atiq M, **Atiq A**, Iqbal K, Imran MY. FEASIBILITY OF RUBY PHANTOM FOR DOSE VERIFICATION AND RADIATION ISOCENTER STABILITY FOR STEREOTACTIC RADIOSURGERY AND RADIOTHERAPY (SRS/SRT) TREATMENTS. *Journal of Tianjin University Science and Technology*. 2023; 56(7).
2. Amin N, **Atiq A**, Ikram M, Atiq M, Naeem H, Yousaf M, Farooq A, Iqbal K, Akbar A. Dosimetric analysis of Rapid Arc (VMAT) treatment planning in head and neck cancer for quality assurance treatment. *Journal of King Saud University-Science*. 2023 Feb 1;35(2):102476.
3. Younis M, Ahmad S, **Atiq A**, Farooq MA, Huang MH, Abbas M. Recent Progress in Azobenzene-Based Supramolecular Materials and Applications. *Chemical Record*. 2023 July 12; 23(7).
4. Li LL, Ajaz M, **Atiq A**, Atiq M, Waqas M, Ashraf MU, Khubrani AM, Khan MA, Yahia IS. Study of identified particle ratios using cosmic rays Monte-Carlo models in pp collisions at  $s = 0.9$  and 7 TeV. *Results in Physics*. 2022 Dec 1; 43:106058.
5. Ovais M, Ali A, Ullah S, Khalil AT, **Atiq A**, Atiq M, Dogan N, Shinwari ZK, Abbas M. Fabrication of colloidal silver-peptide nanocomposites for bacterial wound healing. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 2022 Oct 20; 651:129708. (**Corresponding author**).
6. Abbas M, Ovais M, **Atiq A**, Ansari TM, Xing R, Spruijt E, Yan X. Tailoring supramolecular short peptide nanomaterials for antibacterial applications. *Coordination Chemistry Reviews*. 2022 Jun 1; 460:214481.
7. Younis H, Ahmad F, Anees M, **Atiq A**, Shakeel N, Adil M, Mehboob K, Alhawsawi AM, Khan R, Khubrani AM, Qureshi AA. Gamma radioactivity and Environmental radiation risks of Granitoids in Central and Western Gilgit-Baltistan, Himalayas, North Pakistan. *Results in Physics*. 2022 Jun 1; 37:105509.
8. Sial MU, Majeed MZ, **Atiq A**, Farooq T, Aatif HM, Jaleel W, Khan S, Akbar R, Zaman M, Saeed R, Ali Y. Differential efficacy of edaphic traps for monitoring arthropods diversity in subtropical regions. *Journal of King Saud University-Science*. 2022 Jan 1;34(1):101686.
9. Abbas M, **Atiq A**, Xing R, Yan X. Silver-incorporating peptide and protein supramolecular nanomaterials for biomedical applications. *Journal of Materials Chemistry B*. 2021, **9**, 4444-4458.
10. Andleeb F, Hafeez Ullah, **Atiq A**, Atiq M. Hemoglobin structure at higher levels of hemoglobin A1C in type 2 diabetes and associated complications. *Chinese Medical Journal*. 2020 May 20;133(10):1138.
11. **Atiq A**, Atiq M, Iqbal K, Shamsi QA, Buzdar SA. Evaluation of various dose homogeneity indices for treatment of patients with cervix cancer using intensity-modulated radiation therapy technique. *Journal of Radiotherapy in Practice*. 2019 Mar;18(1):32-7.
12. Andleeb F, **Atiq A**, Atiq M, Malik S. Attenuated total reflectance spectroscopy to diagnose skin cancer and to distinguish different metastatic potential of melanoma cell. *Cancer biomarkers: section A of Disease markers*. 2018;23(3):373-80.
13. Andleeb F, Ullah H, **Atiq A**, et al. Laparoscopic surgery in gall bladder and abdominal disease along with risk factors. *J Cancer Prev Curr Res*. 2018;9(4):210-213
14. **Atiq A**, Atiq M, Iqbal K, Sial M, Altaf S, Shamsi Q, Buzdar S. A comparative study of RapidArc and intensity-modulated radiotherapy plan quality for cervical cancer treatment. *Indian Journal of Cancer*. 2018;55(1):74-9.
15. Buzdar SA, **Atiq A**, Atiq M, Altaf S, Iqbal K. Dosimetric determination of tissue maximum ratios in small fields. *Journal of Radiotherapy in Practice*. 2018 Sep;17(3):289-91.
16. **Atiq A**, Atiq M, Iqbal K, Buzdar SA. Study of dosimetric indices and dose constraints to critical organs for head and neck tumors treated with inverse planned simultaneous integrated boost intensity modulated radiotherapy. *Journal of Radiotherapy in Practice*. 2018 Jun;17(2):179-87.
17. Buzdar SA, Altaf S, **Atiq A**, Atiq M, Iqbal K. Total scatter factor for small fields in radiotherapy: a dosimetric comparison. *Journal of Radiotherapy in Practice*. 2018 Sep;17(3):292-6.

18. Atiq M, **Atiq A**, Iqbal K, ain Shamsi Q, Andleeb F, Buzdar SA. Interpretation of Gamma Index for Quality Assurance of Simultaneously Integrated Boost (SIB) IMRT Plans for Head and Neck Carcinoma. *Polish Journal of Medical Physics and Engineering*. 2017 Dec 1;23(4):93-7.
19. Atiq A, Atiq M, Andleeb F, Iqbal K, Buzdar SA. Effect of Isodose Symmetry of Wedge-shaped Beam Profile for External Radiation Therapy. *Proceedings of Pakistan Academy of sciences*. 2017 A 54(4):417-424.
20. Atiq M, **Atiq A**, Buzdar SA. Gel Dosimeters for Radiotherapy: An Introductory Review. *Pakistan Journal of Medical Research*. 2017 Jul 1;56(3).
21. Atiq M, **Atiq A**, Iqbal K, Shamsi Q, Andleeb F, Buzdar SA. Evaluation of dose conformity and coverage of target volume for intensity-modulated radiotherapy of pelvic cancer treatment. *Indian Journal of Cancer*. 2017 Jan 1; 54(1):379.
22. Atiq M, **Atiq A**, Buzdar SA, Iqbal K, Iqbal MM. Dosimetric comparison of photon beam profile characteristics for different treatment parameters. *Journal of Radiotherapy in Practice*. 2017 Dec; 16(4):444-50.

### ❖ Book Chapter and Book

- **Atia Atiq**, Maria Atiq, Hamza Naeem, Naila Saeed, and Manzar Abbas "Modern Radiation Therapy Techniques and their Toxicities for Breast Cancer" in *Breast Cancer: From Bench to Personalized Medicine*, pp. 429–451, 2022 Springer Nature, Singapore.
- **Book Editing**: Manzar Abbas, **Atia Atiq**, Muhammad Ovais, Michael R. Hamblin "Organic Nanomaterials for Cancer Phototheranostics" Elsevier Publishing Group, Online 15 Oct 2023.
- Shabbir M, **Atiq A**, Atiq M, Andleeb F, Khan HM, Abbas M. Development of metal–peptide composite nanomaterials for diagnosis and phototherapy. In *Organic Nanomaterials for Cancer Phototheranostics 2024* Jan 1 (pp. 81-92). Woodhead Publishing.
- Abbas M, Atiq A, Ovais M, Hamblin MR. *Organic Nanomaterials for Cancer Phototheranostics*. Elsevier; 2023 Jan 1.

### ❖ Soft Skills

I am skilled in the following computer software which can be used for scientific research: Microsoft Office, EndNote, Origin, MATLAB, Adobe Photoshop, etc.

### ❖ Languages

- **English**: Fluent in speaking, expertise in reading and writing. IELTS Overall Band Score 7.0 CEFR level – **C1** (March 2023)  
I have proven experience in writing research and review articles which emphasize my writing expertise.
- **Urdu (Native)**

### ❖ Mentoring Role

- Supervised 10 x Senior Bachelor students for their projects.
- Co-supervised 3 x M.Phil. (MS) student for his degree.

### ❖ Invited Talks/conferences

- Oral Presentation at "3<sup>rd</sup> International Conference on Recent Trends in Natural Science" (24<sup>th</sup> -25<sup>th</sup> April 2024), at University of Education, Lahore Pakistan.
- Invited Speaker to "2<sup>nd</sup> International Conference on Emerging Trends in Physics" (06<sup>th</sup>-08<sup>th</sup> May 2024) at Institute of Physics, The Islamia University of Bahawalpur, Pakistan.
- Invited Speaker to 03 Days International Conference on "Physical Sciences and Engineering" (14<sup>th</sup> 16<sup>th</sup> Dec. 2022) at Khawaja Fareed University of Engineering and Information Technology, Rahim Yar Khan.
- Oral presentation at 11<sup>th</sup> International Istanbul Scientific Research Congress, Oct. 15-17 2022.
- Oral presentation in the 6<sup>th</sup> International Conference on Semiconductor Materials and Nano-Devices (6<sup>th</sup> ICSMAND-2018).
- Poster presentation in 6<sup>th</sup> international symposium on biomedical materials (6<sup>th</sup> ISBM-2017).
- Poster Presentation at the 16<sup>th</sup> Shaukat Khanum Cancer Symposium 2017.

### ❖ Courses Taught

I hold a teaching diploma Bachelor of Education, where I learned pedagogical skills and effective teaching in the classroom. I have taught the following courses to undergraduate and graduate-level classes;

- Solid State Physics
- Medical Physics
- Radiation Therapy
- Electricity, and Magnetism
- Atomic and Molecular Physics
- Classical Mechanics
- Particle Physics
- Nuclear Physics

Instructor teaching evaluation report is above 94% in almost every course. For example,

Teacher Evaluation Report							NAME:Atia Atiq	Logout
							User Name:atia.atiq	
							Department/DivisionMUL	
Teacher/Course Evaluations Cummulative Result								
Sr	Semester	Program	Shift	Section	Subject Code	Subject Name	Evaluation Result	
1	Spring 2022	BS Physics	Morning	A	PHYS4124	Particle Physics	94.51%	

### ❖ Active Role and Outreach

- HEC-approved Supervisor
- Member Organizing Committee “1st and 2<sup>nd</sup> international conference on “Emerging trends in Physics” 23d -24th of May 2022 and 6-8 May 2024 Respectively
- Member of A.Q Khan Society of Physics Department.
- Member of transport, admission, library stocktaking, and various other committees at the University of Education.
- Training on “Peaceful and Safer Campuses” under Media Training and Research Center (MTRC). July 15-17, 2021.
- HEC four-week training “National Faculty Development Program” 2020.
- Review Editorial Board of Frontiers in Materials.
- Reviewer of “Colloid and Surfaces A: Physicochemical and Engineering Aspects” and “BMC Cancer”
- Editorial Board Member of “Radiation Science and Technology”

### ❖ References

References will be furnished on demand.

I hereby declare all the information provided in the CV are true.