Ahmad Nissar

CONTACT INFORMATION

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RESEARCH INTERESTS

Accelerator based Atomic Physics, Lifetime measurement of Metastable states, Beam-Foil interactions, Atmospheric Physics, Nuclear pickup reaction

EDUCATION SCHOOLING, GRADUATION, AND POST-GRADUATION

Class	Year	Institution	Division	Subject	Remarks
S.S.E (10^{th})	1990	JKB	II^{nd}	PH,CH,MA,BI	-
H.S.S.E (12^{th})	1994	JKB	I^{st}	PH,CH,MA	-
B.Sc.(Hons.)	1998	AMU	I^{st}	PH,CH,MA	Physics(Main)
M.Sc.(Physics)	2000	AMU	I^{st}	PH,CA,MA	Physics(Main)
M.Phil	2004	AMU	I^{st}	Atomic Physics	
Ph.D	2009	AMU		Atomic Physics	

TITLE OF THE M.SC. PROJECT: Bose Einstein Condensation in Laser Cooled Cloud of Alkali Atoms

TITLE OF M.PHIL. THESIS: Lifetime and Spectroscopic studies of Highly charged ions using Beam-foil spectroscopy

TITLE OF PH.D. THESIS: Spectroscopic Study of Some Highly Charged Ions Using Beam-Foil Spectroscopy

HONORS AND AWARDS

• Third Position in the order of merit in M.Sc., Department of Physics, Aligarh Muslim University, Aligarh (2000)

• University Merit Fellowship, Department of Physics, Aligarh Muslim University, Aligarh (2000-2002).

• First prize for Oral presentation of research paper entitled "Lifetime Measurement of Highly Charged ions using beam-foil spectroscopy" National Science Day celebration, Department of Physics, Aligarh Muslim University, Aligarh (2005)

•Awarded IIIrd position in the drawing competition organized on the occasion of National Science Day, Department of Physics, Aligarh Muslim University, Aligarh 2000

• National Eligibility for Lectureship (NET) from Council of Industrial and Scientific Research (CSIR) (2001).

• National Eligibility for Lectureship (NET) and Junior Research Fellowship (JRF) from Council of Industrial and Scientific Research (CSIR) (2003).

Membership

- Life-Member of Indian Meteorological Society (IMD), India.
- Life-Member of Redcross Society India.

Lab./Courses taught at University level:

- Atomic and Molecular Physics
- Atmospheric Physics
- Numerical Analysis
- Electrodynamics
- Computational Physics
- Laser (Open Elective)
- Radioactivity and Environmental Radon (General Elective)
- Course Counselor, Choice Based Credit System, Department of Physics, university of Kashmir 2014 -onwards
- Designed and taught two Open/Generic Elective Courses namely "Laser" Radioactivity and "Environmental radon"

M.Sc. Projects completed

- Study of Rainfall/Precipitation Trends at Srinagar and Gulmarg (2013-14)
- Physics of Highly Charged Ions and Beam-Foil Spectroscopy (2013-14)
- Markov Chain Analysis of Rainfall/Precipitation at Gulmarg (2013-14)
- Carcinogenic Profile of Radon: Special Reference to prevalence of lung cancer in Srinagar (2013-14)
- Study of Extreme Weather Events With Special Reference to Jammu and Kashmir (2014-15)
- A New Experimental Setup for Inverse Square Law (2014-15)
- Analysis of Rainfall/Precipitation Data of District Srinagar (2015-16)

International Publications

1. Lifetime Measurement of Highly Charged Ions Relevant to Astrophysics
   Ranjeet K. Karn, C. N. Mishra, **Nissar Ahmad**, C. P. Safvan and T. Nandi, Journal of Atomic, Molecular, Condensate and Nano Physics, **6**, 2349 (2015).

2. Multi channel Doppler tuned spectrometer to study highly charged ions.
   Ranjeet K. Karn, C. N. Mishra, **Nissar Ahmad**, S. K. Saini, C. P. Safvan, and

T. Nandi, Rev. Sci. Instrum. **85**, 066110 (2014).

3. Beam-single and beam-two-foil experimental facility to study physics of highly charged ions.
   Nissar Ahmad, A. A. Wani, R. Ram, S. R. Abhilash, Rakesh Kumar, J. K. Patnaik, Sanker De, R. K. Karn, and T. Nandi, Rev. Sci. Instrum. **77**, 033107 (2006).

4. Reliable measurement of the Li-like Ti $1s2s2p\ ^4P^o_{5/2}$ level Lifetime by beam-foil and beam-two-foil experiments.
   T. Nandi, **Nissar Ahmad**, A. A. Wani, and P. Marketose Phys. Rev. A **73**, 032509 (2006).

5. Lifetime for Li-like $1s2s2p\ ^4P^o_{5/2}$ level using a mode of beam-two-foil experiments.
   T. Nandi, **Nissar Ahmad**, A. A. Wani, Phys. Rev. A **72**, 022711 (2005).

6. Peculiar time dependence of unexpected lines in delayed beam-foil X-ray spectra of V, Fe, and Ni.
   Nissar Ahmad, Ranjeet K. Karan, Pan Marketose and T. Nandi, Nucl. Instrum. B and Methods. **233**, 191 (2004).

7. Inclined Straight Electrostatic Analyzer.
   T. Nandi, **Nissar Ahmad**, Hemant. K. Singh, and R. G. Pillay Rev. Sci. Instrum. **126**, 41 (2004).

8. Lifetime for the $2\ ^3P^o_2$ level in $^{58}Ni^{26+}$ using beam-two-foil experiments.
   T. Nandi, A. A. Wani, **Nissar Ahmad**, P. Marketose, R. P. Singh, R. Ram, and S. A. Ahmad. J. Phys. B **37**, 703 (2004).

Internal Publications:

From Inter University Accelerator Center (IUAC) formerly known as Nuclear Science Center (NSC):

1. Lifetime measurement using a new variant of beam-foil technique.
   T. Nandi , **Nissar Ahmad**, and A. A. Wani, p. 249-250 Annual Report, Nuclear Science Center (2004-2005).

2. Formation of non-statistical Rydberg states from 164 MeV bare Fe-ions colliding with the carbon foil.
   Nissar Ahmad, Ranjeet Karan, and T. Nandi, p. 245-246 Annual Report, Nuclear Science Center (2004-2005).

3. Lifetime of $1s2s2p\ ^4P^o_{5/2}$ level in Li-like ^{48}Ti using Beam-Two-Foil Experiments.
   M.G. Vijaya, Aijaz A. Wani, **Nissar Ahmad**, Rewa Ram, Sankar De, C. P. Safvan, Shabbir Ahmad, N. G. Nayak and Tapan Nandi, p. 241-242 Annual

Report, Nuclear Science Center (2002-2003).

4. Status of Atomic Physics Beam Line.
   P. Barua, R. Ram, A. Kothari, **Nissar Ahmad**, Ranjeet Karan, and T. Nandi, p. 119 Annual Report, Nuclear Science Center (2004-2005).

5. Development of DTS Setup in GPSC.
   Ranjeet Karan, **Nissar Ahmad**, T. Nandi, and R. Ram, p. 119-120 Annual Report, Nuclear Science Center (2004-2005).

6. Physics With Nascent Atoms: Experimental Evidence of Ternary Recombination.
   T. Nandi, **Nissar Ahmad**, and Ranjeet Karn, p. 180-183 Annual Report, Nuclear Science Center (2003-2004).
7. Lifetime of $1s2s2p\ ^4P^o_{5/2}$ in Ti^{19+} by Beam-foil and Beam two Foil experiments.
   T. Nandi, **Nissar Ahmad**, A. A. Wani, and P. Marketose, p. 183-185 Annual Report, Nuclear Science Center (2003-2004).
8. Experimental evidence on intrashell transitions in He-like Ti.
   T. Nandi, **Nissar Ahmad**, and Ranjeet Karn, p. 179-180 Annual Report, Nuclear Science Center (2003-2004).

9. Inclined Electrostatic Charge State Analyzer.
   Nissar Ahmad, Rewa Ram, and T. Nandi, p. 93-94 Annual Report, Nuclear Science Center (2003-2004).

10. Status of LIBR Beam Line For Beam-Foil Experiment.
    Nissar Ahmad, Ranjeet Karan, and T. Nandi, p. 91-92 Annual Report, Nuclear Science Center (2003-2004).

11. Status of LIBR Line for Beam-foil Experiments.
    Rewa Ram, Vijaya Rao, **Nissar Ahmad**, Aijaz Ahmad, S. De., A. Kothari, P. Baura, C. P. Safvan, and T. Nandi, p. 100-101 Annual Report, Nuclear Science Center (2002-2003).

12. Lifetime Measurement of Metastable State in He-like Nickel Using Beam-Foil Spectroscopy.
    Aijaz A. Wani, **Nissar Ahmad**, Shabbir A. Tauheed A. R. P. Singh, Tapan Nandi, p. 157-158 Annual Report, Nuclear Science Center (2001-2002).

CONFERENCE PRESENTATIONS:

B. Papers Presented in Conferences:

1. Experimental Evidence of Ternary Recombination.
   16th Conference on atomic and Molecular Physics at Physical Research Laboratory Ahmad Abad (2004).

2. Experimental Evidence on intrashell transition in He-like Ti^{20+}.
   16th Conference on atomic and Molecular Physics at Physical Research Laboratory Ahmad Abad India (2004).

3. Experimental Evidence of Ternary Recombination.
   8th Workshop on Fast Ion-Atom Collision Sep. Debrecen, Hungary. (2004).

4. Development of High Resolution Doppler Tuned Spectrometer at NSC.
   16th Conference on atomic and Molecular Physics at Physical Research Laboratory Ahmad Abad (2004).

5. Lifetime Measurement of 1s2p2s $1s2s2p\ ^4P^o_{5/2}$ level in He-like Ti using two -foil Experiments.
   14th National Conference on Atomic and Molecular Physics Department of Mathematics14th National Visva-Baharti, Santiniketan India (2003).

6. Lifetime Measurement of $1s2p\ ^3P^o_2$ level in He-like Nickel using two foil-target.
   International conference on current Development of atomic, Molecular, and Chemical Physics held at Delhi University, (2002).

CONFERENCES SCHOOLS WORKSHOP ATTENDED

•Attended Ph.D. teaching Course Module ' Programming techniques' at Nuclear Science Center, 31st July to 24th Aug. 2001 (Now Known as Inter University Center) at New Delhi and obtained A^+ Grade.

• Attended Ph.D. teaching Course Module ' Numerical Analysis' at Nuclear Science Center, 27th Aug. to 18th Sept. 2001 (Now Known as Inter University Center) at New Delhi and obtained A Grade.

•Attended Two-Day workshop for College Principals and senior acedemissions in educational Administration organized by UGC-Academic staff college in collaboration with Directorate of IT ans SS, University of Kashmir from 22nd and 23rd March, 2010.

•Attended Four-Week General Orientation Course, organized by UGC-academic staff college University of Kashmir from 22nd Feb. to 26th March 2010.

•Attended International Conference on "Current Developments in atomic, Molecular and Chemical Physics with Applications", held at Department of Physics and Astrophysics, Delhi University, March 20-22, 2002

•Participated in the 69th BRNS-IANCAS National Workshop on "'Radiochemistry

and Applications of Radioisotopes"' Sponsored by board of research in Nuclear Science, DAE and conducted jointly by Khalsa College, Amritsar and Indian Association of Nuclear Chemists and Allied Science(IANCAS) March 16th-24th, 2009.

•Participated in Workshop on Koha: "'An Open-Source Integrated Library System"' held at DELNET"', New Delhi May 3rd-5th, 2010

•Participated in the Workshop on " Astronomical Techniques and Sciences with Virtual Observational' organized by Department of Physics, University of Kashmir, Sept. 23th-26th, 2013

• Participated in National Science Day Celebrations (Lecture Series and Open day) organized by Department of Physics (Autonomous), University of Mumbai, Santacruz, Mumbai on 28th Feb. 2014

•Attend three day National Science Congress at University of Kashmir (2011)

Participated in 21-day SERC-School entitled "Modern Microscopic Approaches in Nuclear Physics", University of Kashmir w.e.f 17th May to 6th June 2017.

•Participated in the Conference High Energy Emission From AGN organized by Department of Physics, University of Kashmir from 7th to 9th October 2013.

•Participated in One day IUAC Acquaintance Programme on Frontiers in Accelerator Based Physics jointly organized by Department of Physics, University of Kashmir and IUAC New Delhi on 24th June 2014

•Participated and presented paper titled Application of Extreme Values Distribution for the Study of Precipitation/Rainfall Trends Over the State of Jammu and Kashmir in 11th JK science Congress organized by University of Kashmir from October 12-14, 2015.

•Participated in One Day Computational Workshop organized by Department of Physics, University of Kahmir on 25th March 2016.

•Participated in 34th Meeting of Astronomical Society of India jointly organized by Department of Physics, University of Kashmir and Astronomical Society of India on 10th to 13th May 2016.

Professional Experience

• Seven and half Years of teaching experience at Undergraduate Level (College Level).

•Four and half years of teaching experience at Post-graduate level (University Level)

•Coordinator of Educational Satellite Programme (Edu.Sat.) Govt. Degree Col-

lege Kargil Ladhak, (2005-2008)

•Conducted All India Educational tour of Undergraduate students from Govt. Degree College Kargil, Ladhak, academic sessions 2005-2006.

•Conducted All India Educational tour of Undergraduate students from Govt. Degree College Kargil, Ladhak, academic sessions 2006-2007.

•Conducted All India Educational tour of Undergraduate students from Govt. Degree College Kargil, Ladhak, academic sessions 2007-2008.

•Designed Website of Govt. Degree College Doda 2008-2009

•Designed the website of College of Education, Moulana Azad Road Srinagar 2009-2010

•Coordinator of Library Automation Committee, Govt. Degree College Doda 2008-2009

•Coordinator of Educational Satellite Programme (Edu.Sat.) Govt. Degree College Doda , Jammu and Kashmir (2008-20011)

•Coordinator of Educational Satellite Programme (Edu.Sat.) Govt. Degree College Kishtwar, Jammu and Kashmir (2011-20012)

•Appointed as NSS Programme Officer Govt. Degree College Doda, University of Kashmir Academic Session 2010-2011.

•Appointed as Assistant Coordinator of Indira Gandhi National Open University (IGNOU) Center No 1235, Govt. Degree College Doda w.e.f Jan. to Dec. 2012

•Approved Course Counselor for FST-I at SC/PSC/SSC-1235, Indira Gandhi National Open University (IGNOU) Center No 1235, Govt. Degree College Doda w.e.f 2010 onwards.

•Conducted 21-Day All India Annual Educational tour of Post-graduate students, Department of Physics, University of Kashmir, Hazratbal Srinagar-190006 to various Research Institutions of India Feb. 2013.

•Conducted One day Acquaintance Programme of Inter University Accelerator Center, Vasant-Kunj, New Delhi, at University of Kashmir, 23th June 2014.

•Co-director SERC-School on Nuclear Physics, "Modern Microscopic Approaches in Nuclear Physics" held at Department of Physics, University of Kashmir, Hazratbal-190006, Srinagar w.e.f 17th May 2017 to 6th June 2017.

IT-Skills

- 20 years of working experience on various platforms like Linux Redhat, Ubuntu, Fedora, Suse, Mint, Unix, WindowXp, Window 8.1 and Mac.
- Expertise in Fortran Programming and working knowledge of programming using C and java.
- Working knowledge of Web-designing (Microsoft Front-page) and Web-hosting.
- Expertise in scientific script writing/beamer presentation using latex.
- Working knowledge of networking, system assembling and formatting.
- Expertise in graphics using Photodraw V2 and Xfig.