




Faculty Details proforma for DU Web-site

Title	Dr.	First Name	Sanjay Kumar	Last Name	Chamoli	Photograph
Designation	Assistant professor					
Address (Office)	M. Tech Nuclear Science Block, Department of Physics & Astrophysics University of Delhi (North Campus), Delhi - 110007					
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Address (Residence)	21/6 Cavalary Lines, University of Delhi , Delhi – 110007					
Phone No	+91 - 9999062324					
Email	skchamoli@physics.du.ac.in , cylab123@gmail.com					
Educational Qualifications						
Degree	Institution				Year	
Ph.D.	Panjab University, Chandigarh / Inter University Accelerator Center, New Delhi <u>Thesis Topic</u> : The lifetime measurement of the excited nuclear states at high angular momentum in the mass region A = 170 - 190				2004	
M. Sc. (Physics)	H N B Garhwal University, Srinagar Garhwal, Uttarakhand				1992	
B. Sc.	H N B Garhwal University, Srinagar Garhwal, Uttarakhand				1988	
Any other qualification (B.Ed.)	H N B Garhwal University, Srinagar Garhwal, Uttarakhand				1993	
Career Profile						
<ol style="list-style-type: none"> 1. From May 2010 as Assistant Professor at University of Delhi (North Campus), Delhi, India 2. From July 2009 to May 2010 as Assistant Professor at Birla Institute of Technology and Science, Pilani, Rajasthan, India 3. From August 2007 to July 2009, worked as Post Doctoral Fellow in the Department of Nuclear Physics, Australian National University (ANU), Canberra, Australia 4. From December 2004 to August 2007, worked as a Postdoctoral fellow at the 						

<p>Department of Particle Physics, Weizmann Institute of Sciences, Israel</p> <p>5. From February 2001 to October 2008 as Lecturer in Maharaj Singh (P.G.) College, Saharanpur, India</p> <p>6. From November 1998 to March 1999 as Lecturer in D. A. V. College , Sector -10, Chandigarh, India</p>	
Administrative Assignments	
<p>1. Member, 'Anti-ragging Committee' of the Department of Physics and Astrophysics, University of Delhi</p> <p>2. Member, 'Workshop Committee' of the Department of Physics and Astrophysics, University of Delhi.</p> <p>Additionally, I am member of various other committee of the department.</p>	
Areas of Interest / Specialization	
<p>Nuclear Structure Physics (Experimental) ;</p> <ul style="list-style-type: none"> - Gamma ray spectroscopy - Lifetimes measurements (RDM & DSAM) - Nuclear g-factor measurement of excited nuclear states using the TDPAD technique, Transient Field technique and IPAC technique 	
Subjects Taught	
Current Academic Assignments@ Delhi University, Delhi	
<p>1. Nuclear Physics (special paper)</p> <p>2. Nuclear Physics (special paper) Lab-I</p> <p>3. Nuclear Physics (special paper) Lab-II</p>	<p>M. Sc 2nd Year</p> <p>M. Sc. 2nd Year</p> <p>M. Sc. 2nd Year</p>
Research Guidance	
Three students working for their Ph.D., One student submitted his Ph.D. thesis.	
Publications	
Books :	
<p>Title : Nuclear Structure Study at High Spins</p> <p>Publisher : LAP Lambert Academic Publishing, Germany Year of Publication : 2012</p>	
Research Papers :	
(A) In Indexed / Peer Reviewed Journals (Last Five Years)	
<p>1. A. E. Stuchbery, S.K. Chamoli and T. Kibedi, "Particle-rotor versus particle-vibration features in g factors of ¹¹¹Cd and ¹¹³Cd". Physical Review C 93, 031302 (R) (2016).</p> <p>2. R.P. Singh, S.K. Chamoli, et. al., "Lifetime measurements in the yrast band of gamma-soft nuclei ¹³¹Ce and ¹³³Pr". PARMANA Journal of Physics 87 (1), 1-11 (2016).</p> <p>3. Aman Rohilla, S.K. Chamoli, et al., "Fabrication of enriched ¹⁷⁴Yb₂O₃ thin targets on</p>	

Carbon and Tantalum backings". Nuclear Instruments and Methods in Physics Research A 797 (2015) 230-233.

4. C.K. Gupta, S.K. Chamoli, et al., "Fabrication of ^{94}Zr thin target for Recoil Distance Doppler Shift Method of lifetime measurement". Nuclear Instruments and Methods in Physics Research A 764 (2014) 273.
5. S.K. Chamoli, "g (2_1^+) factor measurement with radioactive beams", Proceedings of DAE Symposium on Nuclear Physics Vol. 55, I 9 (2011).
6. S.K. Chamoli, et al., "Measured g factors & the tidal wave description of transition nuclei near $A = 100$ ", Physical Review C 83, 054318 (2011).
7. L. Atanasova, S.K. Chamoli, et al., "g-factor measurements at RISING: The cases of ^{127}Sn and ^{128}Sn ", Euro. Phys. Lett. 91, 42001 (2010).
8. G. Llie, S.K. Chamoli, et al., "g-factor of the \mathcal{T} isomer in ^{126}Sn and first observation of spin-alignment in relativistic fission", Phys. Lett. B 687, 305 (2010).
9. M. Kmiecik, S.K. Chamoli, et al., "Spin alignment and g-factor measurement of the $I^\pi = 12^+$ isomer in ^{192}Pb produced in the relativistic energy fragmentation of a ^{238}U beam", Euro Physics Journal A 45, 153-158 (2010).

(B) In Conferences (in last five years)

1. S.K.Chamoli, et al., "Shape transition in $A \sim 190$ nuclei; a study via lifetime measurement in ^{188}Pt ", at the XI Latin American Symposium of Nuclear Physics and Applications (LASNPA), Medellin, Colombia, 30 Nov.-4 Dec. 2015.
2. Aman Rohilla, S.K.Chamoli, et al., "Lifetime measurement in ^{167}Lu ", at the DAE Symposium on Nuclear Physics 2015, at the Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam (A.P.), India, 7-11 Dec. 2015. (DAE Proceeding Vol. 60, A126 (2015)).
3. C.K. Gupta, S.K.Chamoli, et al., "Lifetime measurement in ^{103}Pd ", at the DAE Symposium on Nuclear Physics 2015, at the Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam (A.P.), India, 7-11 Dec. 2015. (DAE Proceeding Vol. 60, A135 (2015)).
4. Aman Rohilla, S.K.Chamoli, et al., "Lifetime measurement in ^{188}Pt ", at the DAE Symposium on Nuclear Physics 2014, at the Banaras Hindu University, Varanasi, India, 7-12 Dec. 2014. (DAE Proceeding Vol. 59, A114 (2014)).
5. Aman Rohilla, S.K.Chamoli, et al., "RDM Lifetime measurements in ^{167}Lu ", at the DAE Symposium on Nuclear Physics 2014, at the Banaras Hindu University, Varanasi, India, 7-12 Dec. 2014. (DAE Proceeding Vol. 59, A116 (2014)).
6. Shivcharan Verma, S.K.Chamoli, et al., "Polarization measurements and evidence for octupole correlations in ^{122}Ba ", at DAE Symposium on Nuclear Physics 2014, Banaras Hindu University, Varanasi, 7-12 Dec. 2014. (DAE Proceeding Vol. 59, A128 (2014)).
7. R.K. Gurjar, S.K.Chamoli, et al., "HPGe and clover gamma ray detector maintainance", at the DAE Symposium on Nuclear Physics 2014, Banaras Hindu University, Varanasi,

- India, 7-12 Dec. 2014. (DAE Proceeding Vol. 59, G67 (2014)).
8. C.K. Gupta, S.K.Chamoli, et al., *“Simultaneous making of two thin ^{174}Yb targets on two different backings”*, at the DAE Symposium on Nuclear Physics 2014, Banaras Hindu University, Varanasi, India, 7-12 Dec. 2014. (DAE Proceeding Vol. 59, G71 (2014)).
 9. C.K. Gupta, S.K.Chamoli, et al., *“Preparation of thin Gold foil via rolling method”*, at DAE Symposium on Nuclear Physics 2014, Banaras Hindu University, Varanasi, India, 7-12 Dec. 2014. (DAE Proceeding Vol. 59, G72 (2014)).
 10. Aman Rohilla, S.K.Chamoli, et al., *“RDM plunger setup with clover detectors”*, at DAE International Symposium on Nuclear Physics 2013, Bhabha Atomic Research Center, Mumbai, India, 2-6 Dec. 2013. (DAE Proceeding Vol. 58, G52 (2013)).
 11. C.K. Gupta, S.K.Chamoli, et al., *“Fabrication of ^{94}Zr thin target for RDM lifetime Experiment”*, at DAE Symposium on Nuclear Physics 2013, Bhabha Atomic Research Center, Mumbai, India, 2-6 Dec. 2013. (DAE Proceeding Vol. 58, G43 (2013)).
 12. Navneet Sahota, S.K.Chamoli, et al., *“High spin structure in ^{140}Sm ”*, at DAE Symposium on Nuclear Physics 2013, Bhabha Atomic Research Center, Mumbai, India, 2-6 Dec. 2013. (DAE Proceeding Vol. 58, A70 (2013)).
 13. Mansi Saxena, S.K. Chamoli, et al., *“In-beam test of a transient magnetic field based g factor setup”*, at DAE Symposium on Nuclear Physics 2012, University of Delhi, Delhi, India, 3-7 Dec. 2012. (DAE Proceeding Vol. 57, B55 (2012)).
 14. S.K. Chamoli, A.E. Stuchbery, Aman Rohilla, M.C. East, *“Structural issues in exotic nuclei ; how relevant are precisely measured $g(2_1^+)$ factors”* at DAE Symposium on Nuclear Physics 2011, Andhara University, Visakhapatnam, India, 26-30 Dec. 2011. (DAE Proceeding Vol. 56, A130 (2011)).
 15. S.K. Chamoli, A.E. Stuchbery, M.C. East, *“Structural issues in exotic nuclei ; how important are stable beam $g(2_1^+)$ measurements”*, at International Symposium on Nuclear Physics (ISNP11), Hanoi, Vietnam, 22- 26 Nov. 2011.

(C) Invited Talks (in last three years)

1. Delivered two lectures on ‘*Nuclear Structure Studies with g-factor measurements*’ at the School on Experimental Techniques at the Inter University Accelerator Center, Delhi, on April 25-29, 2016.
2. Delivered a lecture on *“Shape evolution and shape transition in Pt nuclei with mass A ~ 190”* in Workshop on Recent Trends in Nuclear Physics (RTNP) at the Inter University Accelerator Center (IUAC), Delhi, India, Sept. 14-15, 2015.
3. Delivered a lecture on *“Complex structure in simple nuclei; an insight into collectivity in mass A ~ 100 region”* in Frontier in Gamm Ray Spectroscopy, (FIG15) Conference at Variable Energy Cyclotron Center (VECC), Kolkata on 19th Feb. 2015.
4. Delivered a lecture on *“study of lifetime and g factor of pico-sec lifetime states with*

<p><i>ancillary equipments”</i> in Workshop on Ancillary equipments for Nuclear @IUAC at the Inter University Accelerator Center (IUAC) on 4th July 2013.</p> <p>5. Delivered a lecture on <i>“Environmental issues and the importance of radiation effects ”</i> in the ‘Refresher Course in Environmental Studies’ at the Department of Environmental Studies, University of Delhi, Delhi, India on 28 Jan. 2013.</p> <p>6. Delivered a lecture on <i>“Radiation technology and its applications in human life ”</i> in the ‘Refresher Course in Physics’ at the Department of Physics & Astrophysics, University of Delhi, Delhi, India on 21 Sept. 2012.</p>
Research Projects (Major Grants/Research Collaboration)
<p><i>Projects : Completed / Ongoing / Approved / Applied :</i></p> <p>1. Project <i>“Nuclear structure studies at high spins in nuclei of mass region A ~ 175”</i> <i>Funding Agency : Inter University Accelerator Center (IUAC), Delhi</i> <i>Duration : 3 years (1st Jan. 2013 – 31st Dec. 2015) Total Cost : 6.7 Lakh</i></p> <p>2. Project <i>“Search for exotic modes of vibration/rotations at high spins in triaxial deformed nuclei near mass 170”</i> <i>Funding Agency : Science and Engineering Research Board (SERB), DST, India.</i> <i>Duration : 3 years (21st May 2014 – 20th May 2017) Total Cost : 15.84 Lakh</i></p>
Awards and Distinctions
<p>1. Junior Research Fellowship of University Grants Commission, on clearing NET exam conducted by CSIR/UGC, India 1998.</p> <p>2. Feinberg Graduate School Postdoctoral Fellowship, Israel 2004.</p> <p>3. Postdoctoral Fellowship from Australian Research Council, Australia 2007.</p> <p>4. Visiting Fellow, Australian National University, Australia, July - December 2009</p> <p>5. Nominated for Germany for 3 Months by the Indian National Science Academy (INSA) under Bilateral Exchange Program 2011-12.</p>
Association With Professional Bodies
None
Other Activities
None