

## **Bio-data of Dr. Sajad Ali**

1. Name and full correspondence address: Dr. Sajad Ali  
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Government General Degree College, Chapra  
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3. Institution: Department of Physics  
Government General Degree College, Chapra  
Vill. Shikra, P. O. Padmamala,  
Nadia 741123, West Bengal
4. Date of Birth: 26.09.1992
5. Gender (M/F/T): Male
6. Category Gen/SC/ST/OBC: Gen
7. Whether differently able: NO
8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of Marks
1.	B. Sc	2013	Physics (Honours)	University of Calcutta	71.5
2.	M. Sc	2015	Physics	University of Calcutta	73.8
3.	Post. M. Sc	2016	Physics	Saha Institute of Nuclear Physics	76.1
4.	Ph. D	2020	Physics (Experimental)	Homi Bhaba National Institute, India	

9. Ph. D thesis title, Guide's Name, Institute/Organization/University, Year of Award:

Ph. D thesis title:

Structural evolution of weakly deformed nuclei in mass  $\sim 140$  region with increasing angular momentum.

Supervisor's Name:

Prof. Sukalyan Chattopadhyay

Institute/Organization/University:

High Energy Nuclear and Particle Physics Division  
Saha Institute of Nuclear Physics  
Kolkata, West Bengal 700064  
and

Homi Bhabha National Institute  
 BARC Training School Complex, Anushakti Nagar,  
 Mumbai, Maharashtra 400094

Date of Award:

14<sup>th</sup> September 2020

10. Work Experience:

SL. No.	Position held	Name of the Institution	From	To	Pay Scale
1.	Assistant Professor Stage I	Govt. General Degree College at Pedong, Kalimpong, 734311	17.10.2019	16.10.2023	UGC Level 10
2.	Assistant Professor Stage II	Govt. General Degree College at Pedong, Kalimpong, 734311	17.10.2023	11.02.2026	UGC Level 11
3.	Assistant Professor Stage II	Government General Degree College, Chapra Nadia 741123	12.02.2026	Continuing	UGC Level 11

11. Professional Recognition/ Award/Prize/Certificate, Fellowship received by the Applicant:

- I. Junior Research Fellowship, UGC-CSIR, 2015
- II. Best poster award at Frontiers in Gamma Ray Spectroscopy FIG18 at held at Tata Institute of Fundamental Research (TIFR).
- III. Teachers Associateship for Research Excellence award with fellowship from Science and Engineering Research Board (SERB, India), Now ANRF for the period of 28/02/2024 – 27/03/2027.
- IV. Outstanding Paper award at 7<sup>th</sup> Regional Science and Technology Congress organized by Dept. of Science Tech and Bio-tech, Govt. of WB in January, 2025.
- V. Outstanding Paper award at 32<sup>nd</sup> West Bengal State Science and Technology Congress organized by Dept. of Science Tech and Bio-tech, Govt. of WB in March, 2025.

12. Publications (*List of papers published in SCI Journals, in year wise descending order*).

SL. No.	Author(s)	Title	Name of the Journal	Vol.	Page	Year
1.	Habibur Rahaman, S. Rajbanshi, Abhijit Bisoi, G. Manna, R. Biswas, Saikat Sen, R. Palit, Sajad Ali, F. S. Babra, R. Banik, S. Bhattacharya, S. Bhattacharyya, P. Dey, Md. S. R. Laskar, G. Mukherjee, S. Nandi, H. Pai, Rajkumar Santra, and T. Trivedi	Coexistence of shapes and octupole correlation in 82Kr	American Physical Society: Physical Review C	113	014309	2026
2.	A. Karmakar, P. Datta, S. S. Nayak, Soumik Bhattacharya, Suchorita Paul, Snigdha Pal, S. Bhattacharyya,	98Mo: A possible candidate for octupole	Elsevier: Nuclear Physics A	1066	123265	2026

	G. Mukherjee, S. Basu, S. Chakraborty, S. Panwar, Pankaj K. Giri, R. Raut, S. S. Ghugre, R. Palit, Sajad Ali, W. Shaikh, S. Chattopadhyay	collectivity in $A \approx 100$ region				
3.	S Basu, G Mukherjee, S Nandi, SS Nayak, S Bhattacharyya, S Chakraborty, Soumik Bhattacharya, S Pal, Shabir Dar, Sneha Das, S Basak, D Kumar, Pratap Roy, D Paul, K Banerjee, S Manna, Samir Kundu, TK Rana, R Pandey, S Samanta, S Chatterjee, R Raut, SS Ghugre, H Pai, A Karmakar, S Chattopadhyay, S Rajbanshi, S Das Gupta, P Pallav, R Banik, <b>S Ali</b>	Rotational band based on $\pi f_{7/2}$ orbital in $^{55}\text{Mn}$	Elsevier: Nuclear Physics A	1059	123092	2025
4.	S Basu, G Mukherjee, S Rajbanshi, Y Utsuno, Noritaka Shimizu, S Nandi, SS Nayak, S Pal, S Bhattacharyya, S Chakraborty, Soumik Bhattacharya, Shabir Dar, Sneha Das, S Basak, D Kumar, D Paul, K Banerjee, Pratap Roy, S Manna, Samir Kundu, TK Rana, R Pandey, S Samanta, S Chatterjee, R Raut, SS Ghugre, H Pai, A Karmakar, S Chattopadhyay, S Das Gupta, P Pallav, R Banik, <b>S Ali</b> , YM Wang, QB Chen	Conclusive evidence of magnetic rotational band in $^{57}\text{Fe}$ : extending the shears mechanism to the fp shell orbital	Elsevier: Physics Letters B	868	139642	2025
5.	S Rajbanshi, R Palit, Habibur Rahaman, G Manna, <b>Sajad Ali</b> , S Chakraborty, GH Bhat, S Jehangir, JA Sheikh, FS Babra, R Banik, S Bhattacharya, S Bhattacharyya, P Dey, Md SR Laskar, G Mukherjee, S Nandi, H Pai, Rajkumar Santra, T Trivedi	Conclusive evidence of a two-neutron multiphonon transverse wobbling mode in $^{82}\text{Kr}$	American Physical Society: Physical Review C	111	L061301	2025
6.	<b>Sajad Ali</b> , S Rajbanshi, Somnath Nag, S Bhattacharyya, S Chattopadhyay, A Goswami, G Mukherjee, R Palit, S Saha, J Sethi, AK Singh, T Trivedi	Exhibition of multiple band structures of different kind in $^{142}\text{Eu}$	American Physical Society: Physical Review C	111	024303	2025
7.	Mamta Prajapati, Somnath Nag, H Pai, S Chakraborty, Soumik Bhattacharya, <b>Sajad Ali</b> , S Rajbanshi, Prithwijita Ray, Subhrajit Sahoo, Praveen C Srivastava, J Meng, FF Xu, A Goswami, R Banik, S Nandi, S Bhattacharyya, G Mukherjee, C Bhattacharya, Md SR Laskar, R Palit, S Samanta, S Das	Evolution of quadrupole and octupole excitations beyond noncollective states in $^{114}\text{Te}$	American Physical Society: Physical Review C	110	064321	2024
8.	A. Karmakar, Nazira Nazir, P. Datta, J. A. Sheikh, S. Jehangir, G. H. Bhat, S. S. Nayak, Soumik Bhattacharya, Suchorita Paul, Snigdha Pal, S. Bhattacharyya, G. Mukherjee, S. Basu, S. Chakraborty, S. Panwar, Pankaj K. Giri, R. Raut, S. S. Ghugre, R. Palit, <b>Sajad Ali</b> , W. Shaikh, and S. Chattopadhyay	Measurement of enhanced electric dipole transition strengths at high spin in $^{100}\text{Ru}$ : Possible observation of octupole deformation	American Physical Society: Physical Review C	110	L051302	2024
9.	S Rajbanshi, G Manna, Habibur	Signatures of	American Physical	110	044315	2024

	Rahaman, <b>Sajad Ali</b> , Somnath Nag, R Palit, H Pai, S Chakraborty, S Bhattacharyya, G Mukherjee, S Saha, J Sethi, AK Singh, T Trivedi	transverse wobbling motion in $^{139}\text{Pm}$	Society: Physical Review C			
10.	S Rajbanshi, G Manna, R Palit, Abhijit Bisoi, Habibur Rahaman, <b>Sajad Ali</b> , FS Babra, R Banik, S Bhattacharya, S Bhattacharyya, P Dey, Md SR Laskar, G Mukherjee, S Nandi, H Pai, Rajkumar Santra, T Trivedi	Antimagnetic rotation in the shape-phase transition point nucleus $^{82}\text{Kr}$	American Physical Society: Physical Review C	109	064308	2024
11.	A. Karmakar, Nazira Nazir, P. Datta, J. A. Sheikh, S. Jehangir, G. H. Bhat, S. S. Nayak, Soumik Bhattacharya, Suchorita Paul, Snigdha Pal, S. Bhattacharyya, G. Mukherjee, S. Basu, S. Chakraborty, S. Panwar, Pankaj K. Giri, R. Raut, S. S. Ghugre, R. Palit, <b>Sajad Ali</b> , W. Shaikh, and S. Chattopadhyay	Possibility of stable octupole deformation in $^{100}\text{Ru}$	<b>American Physical Society:</b> Physical Review C	109	054312	2024
12.	Atreyee Dey, AK Singh, Anwesha Basu, Somnath Nag, G Mukherjee, S Bhattacharyya, S Nandi, S Bhattacharya, R Banik, R Raut, SS Ghugre, S Das, S Samanta, S Chatterjee, A Goswami, <b>S Ali</b> , H Pai, S Rajbanshi	Yrast and nonyrast states in $^{126}\text{Te}$	<b>American Physical Society:</b> Physical Review C	109	044327	2024
13.	S. Basu, G. Mukherjee, S. Nandi, S. S. Nayak, S. Bhattacharyya, Soumik Bhattacharya, Shabir Dar, Sneha Das, S. Basak, D. Kumar, D. Paul, K. Banerjee, Pratap Roy, S. Manna, Samir Kundu, T. K. Rana, R. Pandey, S. Chatterjee, R. Raut, S. S. Ghugre, S. Samanta, R. Banik, A. Karmakar, S. Chattopadhyay, S. Das Gupta, P. Pallav, S. Rajbanshi, <b>S. Ali</b> and H. Pai	Revealing new structures in odd-odd $^{54}\text{Mn}$	Elsevier: European Journal of Physics	59	229	2023
14.	AK Mondal, A Chakraborty, K Mandal, US Ghosh, Aniruddha Dey, Saumyajit Biswas, B Mukherjee, S Chatterjee, SK Das, S Samanta, R Raut, SS Ghugre, S Mukhopadhyay, S Rajbanshi, R Banik, S Bhattacharyya, S Nandi, S Chakraborty, S Bhattacharya, G Mukherjee, <b>S Ali</b> , A Goswami, R Chakrabarti, A Kumar, R Goswami	Investigation of the low- and medium-spin level structure in $^{77}\text{As}$	American Physical Society: Physical Review C	107	064329	2023
15.	S Chakraborty, S Bhattacharyya, R Banik, Soumik Bhattacharya, G Mukherjee, C Bhattacharya, S Biswas, S Rajbanshi, Shabir Dar, S Nandi, <b>Sajad Ali</b> , S Chatterjee, S Das, S Das Gupta, SS Ghugre, A Goswami, A Lemasson, Debasish Mondal, S Mukhopadhyay, A Navin, H Pai, Surajit Pal, Deepak Pandit, R Raut, Prithwijita Ray, M Rejmund, S	Search for the origin of wobbling motion in the $A \sim 130$ region: The case of $^{131}\text{Xe}$	American Physical Society: Physical Review C	107	064318	2023
16.	Rajkumar Santra, Balaram Dey, Subinit Roy, R Palit, Md SR Laskar, H Pai, <b>S Rajbanshi</b> , Sajad Ali, Saikat Bhattacharjee, FS Babra, Anjali	Collective enhancement in nuclear level density of $^{72}\text{Ga}$ and	American Physical Society: Physical Review C	107	064611	2023

	Mukherjee, S Jadhav, Balaji S Naidu, Abraham T Vazhappilly, Sanjoy Pal	$^{71}\text{Ga}$ from $\gamma$ -gated proton spectra				
17.	A Mukherjee, S Bhattacharya, T Trivedi, S Tiwari, RP Singh, S Muralithar, K Katre, R Kumar, R Palit, S Chakraborty, S Jehangir, Nazira Nazir, SP Rouoof, GH Bhat, JA Sheikh, N Rather, R Raut, SS Ghugre, <b>S Ali</b> , S Rajbanshi, S Nag, SS Tiwary, A Sharma, S Kumar, S Yadav, AK Jain	Evidence of transverse wobbling motion in $^{151}\text{Eu}$	American Physical Society: Physical Review C	107	054310	2023
18.	K. Mandal, A. Chakraborty, A. K. Mondal, U. S. Ghosh, Aniruddha Dey, Saumyajit Biswas, B. Mukherjee, S. Rai, S. Chatterjee, S. K. Das, S. Samanta, R. Raut, S. S. Ghugre, S. Bhattacharyya, S. Nandi, S. Bhattacharya, G. Mukherjee, <b>S. Ali</b> , A. Goswami, S. Mukhopadhyay, Krishichayan, R. Banik, R. Chakrabarti, V. Kumar, and A. Kumar	Alignment effects in the medium-spin level structure of $^{78}\text{Se}$	American Physical Society: Physical Review C	105	034328	2022
19.	S Nandi, G Mukherjee, A Dhal, R Banik, Soumik Bhattacharya, S Basu, Shabir Dar, S Bhattacharyya, C Bhattacharya, S Kundu, D Paul, S Rajbanshi, S Chatterjee, S Das, S Samanta, R Raut, SS Ghugre, H Pai, <b>Sajad Ali</b> , S Biswas, A Goswami	Different manifestations of triaxial shapes of the positive and negative parity bands in $^{187}\text{Os}$	American Physical Society: Physical Review C	105	034336	2022
20.	Prithwijita Ray, H Pai, <b>Sajad Ali</b> , A Mukherjee, S Rajbanshi, S Chakraborty, Soumik Bhattacharya, R Banik, S Nandi, S Bhattacharyya, G Mukherjee, C Bhattacharya, G Gangopadhyay, S Samanta, S Das, S Chatterjee, R Raut, SS Ghugre, PC Srivastava, S Jehangir, Bharti Bhoy, N Rather, GH Bhat, JA Sheikh, A Goswami	Three-phonon multiplets in $^{116}\text{Sn}$	Elsevier: Nuclear Physics A	1018	122375	2022
21.	Shabir Dar, Soumik Bhattacharya, S Bhattacharyya, R Banik, S Nandi, G Mukherjee, S Rajbanshi, S Das Gupta, <b>Sajad Ali</b> , S Chakraborty, S Chatterjee, S Das, et al.	Magnetic rotational band in $^{116}\text{Sb}$	Elsevier: Nuclear Physics A ( <i>Impact Factor: 1.683</i> )	1016	122382	2022
22.	S Rajbanshi, R Palit, R Raut, YY Wang, ZX Ren, J Meng, QB Chen, <b>Sajad Ali</b> , H Pai, FS Babra, R Banik, S Bhattacharya, S Bhattacharyya, P Dey, S Malik, G Mukherjee, Md SR Laskar, S Nandi, Rajkumar Santra, T Trivedi, SS Ghugre, A Goswami	Evidence of octupole correlation in $^{79}\text{Se}$	American Physical Society: Physical Review C	104	064316	2021
23.	S Rajbanshi, S Bhattacharya, R Raut, R Palit, <b>Sajad Ali</b> , Rajkumar Santra, H Pai, FS Babra, R Banik, S Bhattacharyya, P Dey, G Mukherjee, Md SR Laskar, S Nandi, T Trivedi	Experimental evidence of exact E(5) symmetry in $^{82}\text{Kr}$	American Physical Society: Physical Review C	104	L031302	2021
24.	A Kundu, Md SR Laskar, R Palit, R Raut, S Santra, N Shimizu, T Togashi, E Ideguchi, H Pai, <b>S Ali</b> , FS Babra, R Banik, Soumik Bhattacharya, S Biswas, Biswajit	New lifetime measurement for the $2^+_1$ level in $^{112}\text{Sn}$ by the Doppler-shift	American Physical Society: Physical Review C	103	034315	2021

	Das, P Dey, R Donthi, A Goswami, S Jadhav, G Mukherjee, BS Naidu, S Rajbanshi, LP Singh	attenuation method				
25.	AK Mondal, A Chakraborty, K Mandal, US Ghosh, Aniruddha Dey, Saumyajit Biswas, B Mukherjee, S Rai, S Chatterjee, SK Das, S Samanta, R Raut, SS Ghugre, S Rajbanshi, R Banik, S Bhattacharyya, S Nandi, S Bhattacharya, G Mukherjee, <b>S Ali</b> , A Goswami, R Chakrabarti, S Mukhopadhyay, AK Sinha, V Kumar, A Kumar	Investigation of different possible excitation modes in neutron-rich $^{78}\text{As}$	American Physical Society: Physical Review C	102	064311	2020
26.	S. Nandi, G. Mukherjee, Q. B. Chen, S. Frauendorf, R. Banik, Soumik Bhattacharya, Shabir Dar, S. Bhattacharyya, C. Bhattacharya, S. Chatterjee, S. Das, S. Samanta, R. Raut, S. S Ghugre, S. Rajbanshi, <b>Sajad Ali</b> , H. Pai, Md. A. Asgar, S. Das Gupta, P. Chowdhury	First observation of multiple transverse wobbling bands of different kinds in $^{183}\text{Au}$	American Physical Society: Physical Review C	125	132501	2020
27.	Prithwijita Ray, H Pai, <b>Sajad Ali</b> , Anjali Mukherjee, A Goswami, S Rajbanshi, Soumik Bhattacharya, R Banik, S Nandi, S Bhattacharyya, G Mukherjee, C Bhattacharya, S Chakraborty, G Gangopadhyay, Md SR Laskar, R Palit, GH Bhat, S Jehangir, JA Sheikh, AK Sinha, S Samanta, S Das, S Chatterjee, R Raut, SS Ghugre	Quasi- $\gamma$ band in $^{114}\text{Te}$	American Physical Society: Physical Review C	101	064313	2020
28.	Rajkumar Santra, Balam Dey, Subinit Roy, Md SR Laskar, R Palit, H Pai, S Rajbanshi, <b>Sajad Ali</b> , Saikat Bhattacharjee, FS Babra, Anjali Mukherjee, S Jadhav, Balaji S Naidu, Abraham T Vazhappilly, Sanjoy Pal	Nuclear level density of $^{69}\text{Zn}$ from gamma gated particle spectrum and its implication on $^{68}\text{Zn}(n, \gamma)^{69}\text{Zn}$ capture cross section	Elsevier: Physics Letters B	806	135487	2020
29.	R Banik, S Bhattacharyya, S Biswas, Soumik Bhattacharya, G Mukherjee, S Rajbanshi, Shabir Dar, S Nandi, <b>Sajad Ali</b> , S Chatterjee, S Das, S Das Gupta, SS Ghugre, A Goswami, A Lemasson, D Mondal, S Mukhopadhyay, H Pai, S Pal, D Pandit, R Raut, Prithwijita Ray, M Rejmund, S Samanta	Revealing multiple band structures in $^{131}\text{Xe}$ from the $\alpha$ -induced reaction	American Physical Society: Physical Review C	101	044306	2020
30.	<b>Sajad Ali</b> , S. Rajbanshi, B. Das, S. Chattopadhyay, M. Saha Sarkar, and A. Goswami, R. Raut, Abhijit Bisoi, Somnath Nag, S. Saha, J. Sethi, and R. Palit, G. Gangopadhyay, T. Bhattacharjee, S. Bhattacharyya, and G. Mukherjee, A. K. Singh, T. Trivedi	Evidence of the octupole correlation between the shears bands in $^{142}\text{Eu}$	Elsevier: Physics Letters B	798	134960	2019
31.	H. Pai, <b>Sajad Ali</b> , S. Rajbanshi, Prithwijita Ray, Subinit Roy, A. Goswami	$^{112}\text{Sn}$ Target : Fabrication, Characterization and Application	Elsevier: Vacuum	167	393	2019
32.	S. Rajbanshi, R. Raut, H. Pai, <b>Sajad Ali</b> , A. Goswami, G. Gangopadhyay, S. Bhattacharyya, G. Mukherjee,	Extremely asymmetric shears band in $^{143}\text{Sm}$	American Physical Society: Physical Review C	98	061304 ( R )	2018

	S.Muralithar, R. P. Singh, M. Kumar Rajug, P. Singh, R. K. Bhowmik					
33.	S. Rajbanshi, R. Raut, H. Pai, <b>Sajad Ali</b> , A. Goswami, G. Gangopadhyay, S. Bhattacharyya, G. Mukherjee, S.Muralithar, R. P. Singh, M. Kumar Raju, P. Singh, R. K. Bhowmik	Abrupt phase change of the core rotation in $^{143}\text{Sm}$	Elsevier: Physics Letters B	782	143	2018
34.	<b>Sajad Ali</b> , S. Rajbanshi, B. Das, S. Chattopadhyay, M. Saha Sarkar, and A. Goswami, R. Raut, Abhijit Bisoi, Somnath Nag, S. Saha, J. Sethi, and R. Palit, G. Gangopadhyay, T. Bhattacharjee, G. Mukherjee, A. K. Singh, T. Trivedi	Evidence of antimagnetic rotation in an odd-odd nucleus: The case of $^{142}\text{Eu}$ :	American Physical Society: Physical Review C	96	021304 ( R )	2017
35.	S. Rajbanshi, <b>Sajad Ali</b> , Abhijit Bisoi, Somnath Nag, S. Saha, J. Sethi, T. Bhattacharjee, S. Bhattacharyya, S. Chattopadhyay, G. Gangopadhyay, G. Mukherjee, R. Palit, R. Raut, M. Saha Sarkar, A. K. Singh, T. Trivedi, and A. Goswami:	Shears mechanism and development of collectivity in $^{141}\text{Sm}$	American Physical Society: Physical Review C	94	044318	2016

13. Details of patents: Nil

14. Books/Reports/Chapters/General articles etc.: "NA"

15. Any other Information (maximum 500 words)

Extramural research grants received One

a. Teachers Associateship for Research Excellence (TARE):

Project title: Second order phase transition in atomic nuclei: E(5) symmetry breaking in  $^{74}\text{Se}$  and  $^{86}\text{Zr}$

Sanction Amount: 18,30,000/- INR

File No.: TAR/2023/000216

Sponsoring Agency: ANRF, India (Previously ANRF)

Duration: Three Years (28<sup>th</sup> February 2024 – 27<sup>th</sup> February 2027)

Status: Ongoing

Sincerely



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