



Prof Ranjana Goswami

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Phone: , 9903185157

Address: Kolkata ,West Bengal,India - 700036

Expertise

Nuclear Physics

Completed Ph.D in experimental Nuclear Physics on the "Spectroscopic study of $^{121,123}\text{I}$ nuclei". Also worked in the field of Nuclear Astrophysics, Condensed Matter Physics (nanoscience).

Work experience

1. B. P. Poddar Institute of Management and Technology 115 2023 — Present

Professor

24 Paraganas North

2. B. P. Poddar Institute of Management and Technology 115 2013 — 2022

Head of the Department

24 Paraganas North

3. B. P. Poddar Institute of Management and Technology 115 2004 — 2011

Assistant Professor

24 Paraganas North

4. B. P. Poddar Institute of Management and Technology 115 2003 — 2004

Assistant Lecturer

24 Paraganas North

5. **Jadavpur University 2002 — 2002**

Assistant Professor
Kolkata

6. **UGC-DAE Consortium for Scientific Research 2001 — 2003**

Post-Doctoral Research Associate
Kolkata

7. **DAE-Variable Energy Cyclotron Centre 1999 — 2001**

Visiting Scientist
Kolkata

8. **DAE-Variable Energy Cyclotron Centre 1996 — 1998**

Visiting Scientist
Kolkata

9. **Saha Institute of Nuclear Physics 1996 — 1996**

Post-Doctoral Research Associate
Kolkata

10. **Saha Institute of Nuclear Physics 1987 — 1996**

Research Fellow
Kolkata

Education

1. **Visiting Scientist - 2001**

Variable Energy Cyclotron Centre, Kolkata

2. **Post Doctoral Fellow - 2001**

UGC-DAE-CSR-KC

3. **Visiting Scientist - 1998**

Institute of Physical and Chemical Research, Riken, Japan

4. **Visiting Scientist - 1997**

Variable Energy Cyclotron Centre, Kolkata

5. Ph.D - 1996

Saha institute of Nuclear Physics, Kolkata

6. Post doctoral Fellow - 1996

Saha Institute of Nuclear Physics

7. Master of Science - 1983

University College of Science and Technology , Kolkata

8. Bachelor of Science - 1981

Lady Brabourne College Kolkata

9. Higher Secondary (+2) - 1978

Modern High School for Girls, Kolkata

10. Indian Certificate of Secondary Education - 1976

Carmel Convent School Durgapur

Honours and Awards

1. Grant from AICTE for organizing an ATAL FDP on "Astronomy , Astrophysics and Related Challenges" from 4th-8th Jan, 2022 - 2022

All India Council for technical Education

2. online UHV Refresher 1 FDP - 2022

All India Council for Technical Education (AICTE)

3. Obtained Elite certificate for successfully completing a four week training program with proctored exam on "Structure and properties of Nanomaterials". - 2020

Swayam NPTEL

4. Certificate for attending an online Faculty development Emerging Trends in Sensors, Security and Smart Automation Systems.program

on - 2020

Dept of EE, BPPIMT, July 8-12, 2020

5. Certificate for successfully completing ATAL FDP on Blockchain - 2020

ATAL AICTE

6. Certificate for attending online FDP on Recent Trends in Communication Systems and Devices - 2020

Dept of ECE, BPPIMT, July 21-25, 2020

7. Obtained certificate for successfully completing the FDP on Inculcating Universal Human Values in Technical Education - 2020

AICTE

8. Obtained certificate for successfully completing the FDP on Recent Advancements in Physics. - 2020

RCC Institute of Technology, September 4-8, 2020

9. Organized a three day webinar on Scope of Engineering Studies with Innovation and Challenges - 2020

B.P.Poddar institute of Mgmt. and Technology Kolkata.

10. Obtained certificate for successfully completing a two-week FDP on Control System, - 2020

National Institute of Technical Teachers Training and Research (NITTTR)

11. Obtained certificate for successfully completing a two day Workshop on Python Programming – The Modern Era of Scientific Computation - 2019

Prabhu Jagatbandhu College, Howrah

12. Received certificate for successfully completing two day workshop on Outcome based education conducted by NITTTR at our Institute - 2019

NITTTR

13. Completed successfully a five day training program on ICT based STTP “Assessment and Evaluation under Outcome Based Education” - 2019

National Institute of Technical Teachers Training and Research (NITTTR)

14. Elite Certificate for successfully completing a twelve week training program with proctored exam on Nuclear and Particle Physics. - 2019

Swayam NPTEL

15. Completed successfully a training program of two weeks on STTP on Fundamentals and Applications of Nanomaterials - 2018
National Institute of Technical Teachers Training and Research (NITTTR)
16. successfully completed a one-week training program on "Preparation of Laboratory Manual" - 2018
National Institute of Technical Teachers Training and Research (NITTTR)
17. Invited as a member of the core committee of board of studies of West Bengal University of Technology for the revision of the theoretical and experimental syllabus of Engineering Physics, - 2017
Maulana Abul Kalam Azad University of Technology
18. Acted as coordinator for three consecutive years for organising intra college English language Fest "Panache" for three consecutive years. - 2016
B.P.Poddar institute of Mgmt. and Technology Kolkata.
19. Obtained certificate of appreciation for acting as judge of PATW-IET(U.K) Kolkata Chapter - 2015
Department of Electrical Engineering of B.P.Poddar Institute (Kolkata chapter)
20. Appointed as one of the judges of recitation competition between the students of B.P.Poddar Institute - 2014
B.P.Poddar institute of Mgmt. and Technology Kolkata.
21. Received certificate of appreciation for acting as judge for "Present Around the World Competition" PATW -IET(UK) - 2014
Department of Electrical Engineering of B.P.Poddar Institute (Kolkata chapter)
22. Appointed as one of the judges of debate competition between the students of B.P.Poddar Institute, - 2013
B.P.Poddar institute of Mgmt. and Technology Kolkata.
23. Nominated as a member of the Extramural Research Committee from the department - 2013
B.P.Poddar institute of Mgmt. and Technology Kolkata.
24. Appointed the Faculty Counsellor for three consecutive years for the 1st year students of Computer Science. - 2010
B.P.Poddar institute of Mgmt. and Technology Kolkata.
25. Appointed the Head Examiner of Engineering - 2007
Maulana Abul Kalam Azad University of Technology

26. Invited as a member of the core committee of West Bengal University of Technology for the revision of the theoretical and experimental syllabus of Engineering Physics, - 2007

Maulana Abul Kalam Azad University of Technology

27. Appointed the Head Examiner of Engineering Physics - 2006

Maulana Abul Kalam Azad University of Technology

28. Invited as Visiting Scientist in the Institute of Physical and Chemical Research at Riken , Japan. - 1998

Institute of Physical and Chemical Research Riken, Japan

29. Invited for special lecture at National Symposium on Nuclear Structure in Andhra University, Tirunelvely - 1996

Andhra University

30. Invited for special lecture at DAE Symposium on Nuclear Structure, 1995 - 1995

Department of Atomic Energy, BARC, Mumbai, India

31. Obtained scholarship for securing first class and 58Th rank for B.Sc (Honours). - 1982

University of Calcutta

Research Project

Spectroscopic study of nuclei near proton dripline-109-1111

Role: Principal investigator

Year 2014, Amount 1000000

Membership In Professional Bodies

1. Saha Institute of Nuclear Physics Alumni Association, 2006
Regular

Membership In Committees

1. Research Advisors, 2025
Research Advisor
2. Institute Academic Cell, 2019
Member
3. Internal Quality Assurance Committee, 2019
Member
4. Students' Grievance Redressal Committee, 2019
Member
5. Antiragging Committee, 2019
Member
6. Right to Information Committee, 2019
Member
7. Disciplinary Committee, 2019
Member
8. Member of the anti-ragging committee of B.P.Poddar Institute of Management and Technology., 2015
Core committee member
9. Member of the committee of B.P.Poddar Institute of Management and Technology organizing a conference on "Recent Trend in Computer Technology" 28th March, 2009., 2009
Member
10. Invited as a member of the core committee of West Bengal University of Technology for the revision of the theoretical and experimental syllabus of Engineering Physics, 2007, 2007
Member
11. Appointed the Head Examiner of Engineering Physics by West Bengal University of Technology 2006 and 2007., 2006
Member

Publication

1. Investigation of low- and medium-spin level structure in ^{77}As

A.K. Mondal* , A. Chakraborty† , K. Mandal‡ , U.S. Ghosh, Aniruddha Dey, Saumyajit Biswas§ , B. Mukherjee, Krishichayan ,S. Chatterjee, S.K. Das, S. Samanta, R. Raut, S.S. Ghugre, S. Mukhopadhyay, S. Rajbanshi, R.Goswami et. al.
Physical Review C, Volume 107, issue-6, Year 2023, Pages 064320

2. Yrast Spectroscopy of ^{77}As

A.K. Mondal¹ , A. Chakraborty¹ , * K. Mandal¹ , U.S. Ghosh¹ , Aniruddha Dey¹ , S. Biswas¹ , B. Mukherjee¹ , Krishichayan^{2,3} , S. Mukhopadhyay^{4,8} , S. Chatterjee⁵ , S.K. Das⁵ , S. Samanta⁵ , R. Raut⁵ , S.S. Ghugre⁵ , S. Rajbanshi⁶ , R. Banik^{7,8} , S. Bhattacharyya^{7,8} , S. Nandi^{7,8} , S. Bhattacharya^{7,8} , G. Mukherjee^{7,8} , S. Ali⁹ , A. Goswami^{9†} , R. Chakrabarti¹⁰ , A. Kumar¹¹ , and R. Goswami¹²
Proceedings of DAE Symposium of Nuclear Physics, Volume 66, Year 2023, Pages 104

3. Observation of signature partner bands in ^{117}Sb

R. Banik, S. Bhattacharyya, Soumik Bhattacharya, G. Mukherjee, R. Goswami, D. Choudhury, S. Das, S. Samanta, S. S. Ghugre, R. Raut, and A. Goswami
Phys. Rev. C 101, 014322 – Published 27 January 2020, Volume 101, Year 2020, Pages 014322

4. Signal processing and Nuclear Structure of ^{106}Cd

D. Chowdhury & R. Goswami
National Conference on Information, Photonics and Communication , Volume , Year 2019, Pages

5. Identification of new partner band based on $g_{7/2}$ state in ^{117}Sb

R. Banik, S. Bhattacharyya, Soumik Bhattacharya, G. Mukherjee, R. Goswami, D. Choudhury, S. Das, S. Samanta, S. S. Ghugre, R. Raut, and A. Goswami
Proceedings of the DAE symposium on Nuclear Physics, Volume 63, Year 2018, Pages 80

6. Octupole Correlations in ^{106}Cd

D Choudhury, R Goswami, S.S. Ghugre, R Raut, A Deo, A.K. Sinha
Proceedings of the DAE symposium on Nuclear Physics, Volume 63, Year 2018, Pages 322

7. Nuclear structure of ^{102}Ag from in-beam gamma-ray spectroscopy

Dipshikha Chowdhury and Ranjana Goswami
Photonics & Communication (IPC '17), Volume , Year 2017, Pages 171-175

8. Structure of Strongly Coupled Band of ^{117}Sb at High Spin

D.Choudhury, R.Goswami, S.S.Ghugre, R.Raut, R. Bhattacharjee
61 st DAE-BRNS symposium in Nuclear Physics, Volume , Year 2016, Pages 308-309

9. Semiconducting properties of Graphite-Clay Composite at extreme temperatures

P.K.Ghosh, R.Goswami, D.Das, JBM Krishna, S.Chatterjee, P.V.Rajesh,
National Thematic Workshop on Recent Advances in Materials Sciences,, Volume , Year 2016, Pages

10. A Comparative study of the strongly coupled band in ^{111}In and ^{115}Sb

Md.Alibordi, R.Goswami, S.S.Ghugre

11. **Fingerprint states in 115,117,119I in the framework of particle rotor model.**
R.Goswami, and S.Sen
Physica Scripta 85, (2012) 035201, Volume 85, Year 2012, Pages 035201-11
12. **AC conductivity and dielectric analysis of graphite-clay nanocomposite**
Goswami R.;Chakravartty S.C.;Krishna J.B.M.;Bose E.;Das D.;Chaudhury S.K.;Mukherjee S.;Saha P.;Mukherjee U.;Das P.K.;Banerjee R.
Canadian Journal of Physics, Volume 89, Year 2011, Pages 1255-1260
13. **Low Temperature DC conductivity of Graphite Kaolinite composite**
R.Goswami, S.C.Chakravartty, E.Bose, U.Mukherjee,P.Saha and P.Mandal.
Proceedings of National Conference on Emerging Areas of Photonics and Electronics , Volume , Year 2011, Pages 65-69
14. **Conducting Properties of Nanostructured Graphite-Clay Composite**
R.Goswami, S.C.Chakravartty, P.Saha, U.Mukherjee, J.B.M.Krishna, D.Das, A.K.Mishra, P.K.Das and R.Banerjee
Condensed Matter Days , Volume , Year 2010, Pages 103
15. **Electromagnetic response of nanosized composites made of graphite and clay.**
R.Goswami, S.C.Chakravartty,S.Mukherjee U.Mukherjee,P.Saha, S.Chatterjee
Recent Trends in Computing Technologies , Volume , Year 2009, Pages 12
16. **Fingerprint States in odd mass 115I nuclei in the framework of Particle Plus Rotor Model**
R.Goswami, M.Saha Sarkar, S.Sen.
Proceedings of DAE Nuclear Physics Symposium, Volume , Year 2008, Pages
17. **Design of a Dipole Magnet for Transport of Low Energy Heavy-Ion Beams**
R.Goswami, S.C.Chakravartty
Emerging Trends in Electrical Technology (ETET) , Volume , Year 2006, Pages
18. **Electrical conductivity of Graphite-Clay nanocomposite**
R.Goswami, S.C.Chakravartty, A.Roy, S.Sasmal
Recent Trends in Electronics Technology(RTET) , Volume , Year 2006, Pages
19. **Spin-Parity measurements In the neutron rich N/J 20 34P and 36S**
Krishichayan A.Chakraborty, S.S.Ghugre, R.Goswami
Eur.Phys.J.A29, (2006), Volume 29, Year 2006, Pages 151-159
20. **Spectroscopy of Nb90 at high spin**
Chakraborty A.;Krishichayan ;Ghugre S.S.;Goswami R.;Mukhopadhyay S.;Pattabiraman N.S.;Ray S.;Sinha A.K.;Sarkar S.;Rao P.V.M.;Garg U.;Basu S.K.;Chaterjee M.B.;Sarkar M.S.;Chaturvedi L.;Dhal A.;Sinha R.K.;Govil I.M.;Bhowmik R.K.;Jhingan A.;Madhavan N.;Muralithar S.;Nath S.;Singh R.P.;Sugathan P.

21. High-spin states in the odd-odd nucleus ^{146}Tb

Krishichayan, A Chakraborty, SS Ghugre, R Goswami, S Mukhopadhyay, NS Pattabiraman, S Ray, AK Sinha, S Sarkar, PV Madhusudhana Rao, U Garg, SK Basu, BK Yogi, L Chaturvedi, A Dhal, RK Sinha, M Saha Sarkar, S Saha, R Singh, RK Bhowmik, A Jhingan, N Madhavan, S Muralithar, S Nath, RP Singh, P Sugathan

Physical Review C, Volume 70, Year 2004, Pages 044315

22. Lifetime measurements of microsecond isomers in the $N=48$ nuclei ^{88}Zr and ^{90}Mo using recoil isomer tagging

A. Chakraborty, Krishichayan, S. S. Ghugre, R. Goswami, S. Mukhopadhyay, N. S. Pattabiraman, S. Ray, A. K. Sinha, S. Sarkar, P. V. Madhusudhana Rao, U. Garg, S. K. Basu, L. Chaturvedi, A. Dhal, R. K. Sinha, I. M. Govil, M. B. Chatterjee, M. Saha Sarkar, R. K. Bhowmik, A. Jhingan, N. Madhavan, S. Muralithar, S. Nath, R. P. Singh, and P. Sugathan

PHYSICAL REVIEW C, Volume 70, Year 2004, Pages 014311

23. Experimental study of nuclear structure of ^{91}Mo at high spin

S. Ray, N. S. Pattabiraman, R. Goswami, S. S. Ghugre, A. K. Sinha, and U. Garg

PHYSICAL REVIEW C, Volume 69, Year 2004, Pages 054314

24. Gamma-Ray Polarisation Measurements using a Multi-Clover Array

S.Ray, N.S.Pattabiraman, A.Chakraborty, Krishichayan, R.Goswami,S.S.Ghugre, A.K.Sinha and U.Garg
Proceedings of the DAE symposium on Nuclear Physics, Volume , Year 2002, Pages

25. Spectroscopy of ^{89}Nb and ^{91}Nb at high spins

N.S.Pattabiraman, S.Ray, A.Chakraborty, Krishichayan, R.Goswami,S.S.Ghugre, A.K.Sinha

Proceedings of the DAE symposium on Nuclear Physics, Volume , Year 2002, Pages

26. Particle-rotor-model calculations in ^{125}I

Sharma, H. and Sethi, B. and Banerjee, P. and Goswami, R. and Bhandari, R.K. and Singh, J.

Pramana - Journal of Physics, Volume 57, Year 2001, Pages 171-174

27. Half-life of ^{44}Ti

T.Hashimoto, K.Nakai, Y.Wakasaya, I.Tanihata, Z.Fulop, H.Kumagai, A.Ozawa, K.Yoshida, R.Goswarmi

Nuclear Physics A, Volume 686, Year 2001, Pages 591-599

28. Half-life determination of ^{44}Ti using radioactive beam technique

Zs. Fülöp, Y. Wakasaya, C. Bordeanu, M. Golovkov, R. Goswami, T. Kato, K. Kimura, H. Kudo, Y.

Mochizuki, H. Otsu¹, A. Ozawa¹, H. Petruscu¹, H. Sakurai¹, T. Suzuki³, I. Tanihata¹, K. Yoshida¹, R. N. Boyd⁴, A. Krasznahorkay⁵, and E. Somorjai⁵

AIP Conference Proceedings , Volume 529, Year 2000, Pages 684

29. Design of the Beam Transport Line from ECRIS to RFQ Linac for VEC-RIB.

Ranjana Goswami

Technical Note, Volume , Year 2000, Pages

30. Experimental evidence for coexisting structures in ^{125}I

Hariprakash Sharma, B. Sethi, P. Banerjee, Ranjana Goswami, R. K. Bhandari, and Jahan Singh
PHYSICAL REVIEW C, Volume 63, Year 2000, Pages 014313

31. **Determination of ^{44}Ti using radioactive beam technique**

C.Bordeanu, M.Golovkov, R.Goswami

Symposium on Capture Gamma ray Spectroscopy & related topics, Santa Fe, New Mexico, USA, Aug30-Sept.3 (1999), Volume , Year 1999, Pages

32. **Collective bands in ^{125}I**

Hariprakash Sharma, B. Sethi, Ranjana Goswami, P. Banerjee, R. K. Bhandari, and Jahan Singh
PHYSICAL REVIEW C, Volume 59, Year 1999, Pages 2446

33. **Oblate band in ^{125}I**

H.Sharma, B.Sethi, R.Goswami,P.Banerjee et al.

Proceedings of the DAE symposium on Nuclear Physics, Volume 40B, Year 1999, Pages 34

34. **Empirical formalism for projectile fragmentation and production of new neutron-rich nuclei with ribs**

Bhowmick, Debasis;Chakrabarti, Alok;Basu, D. N.;Ghosh, Premomoy;Goswami, Ranjana
Modern Physics Letters A, Volume 13, Year 1998, Pages 2665-2678

35. **Design of the Beam Transport Line from ECR ion source to RFQ Linac for VEC-RIB.**

R. Goswami, P.Ghosh, A.Chakrabarti et al.

Proceedings of the DAE symposium on Nuclear Physics, Volume , Year 1997, Pages

36. **Modified empirical formalism for projectile fragmentation**

D.Bhowmik, P.Ghosh, R.Goswami, D.N.Basu, et al.

Proceedings of the DAE symposium on Nuclear Physics, Volume 40B, Year 1997, Pages 278

37. **High Spin States in ^{77}Se**

B.Sethi, A.Goswami, M.B.Chatterjee, R.Goswami

Proceedings of the DAE symposium on Nuclear Physics, Volume , Year 1996, Pages

38. **B(M1)/B(E2) ratios in the $g_{9/2}$ proton-hole bands in the neutron deficient odd-mass iodine isotopes.**

R.Goswami, B.Sethi, M.Saha Sarkar and S.Sen.

Proceedings of the DAE symposium on Nuclear Physics, Volume , Year 1996, Pages

39. **Positive Parity Bands in ^{125}I**

H.Sharma, R.Goswami, B.Sethi, P.Banerjee et al.

Proceedings of the DAE symposium on Nuclear Physics, Volume 39B, Year 1996, Pages 86

40. **Band Structures of $^{121,123}\text{I}$**

R. Goswami, B. Sethi, M. S. Sarkar & S. Sen

Zeitschrift für Physik A Hadrons and Nuclei , Volume 352, Year 1995, Pages 391-395

41. **Role of $g_{9/2}$ neutron orbital in the structure of ^{65}Zn**

P Banerjee, B Sethi, MB Chatterjee, R Goswami
PHYSICAL REVIEW C, Volume 50, Year 1994, Pages 1813-1818

42. **Band Structure in 85-Zn**

P.Banerjee, B.Sethi, M.B. Chatterjee, R.Goswami et al.
Proceedings of the DAE symposium on Nuclear Physics, Volume , Year 1993, Pages

43. **Band Structure of 121,123I in the framework of rotation particle coupling model.**

R.Goswami, B.Sethi, M. Saha Sarkar,S.Sarkar and S.Sen.
Proceedings of the DAE symposium on Nuclear Physics, Volume , Year 1993, Pages

44. **Spectroscopy of 123 I**

Ranjana Goswami, B. Sethi, P. Banerjee, and R. K. Chattopadhyay
PHYSICAL REVIEW C, Volume 47, Year 1993, Pages 1013

45. **Band Structure of 123-I**

R.Goswami, B.Sethi, P.Banerjee et al.
Proceedings of the DAE symposium on Nuclear Physics, Volume , Year 1991, Pages

46. **Properties of high spin states in 53 Cr and 53 Mn**

P. Banerjee, B. Sethi, M. B. Chatterjee, and R. Goswami
PHYSICAL REVIEW C, Volume 44, Year 1991, Pages 1128