

## CURRICULUM VITAE

### **TARKESHWAR TRIVEDI**

Department of Pure & Applied Physics,  
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India

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**Date of Birth:** 15<sup>th</sup> February 1979

**Marital Status:** Married

**Nationality:** Indian

**Present Position:** Assistant Professor

### EDUCATION

**Ph.D. in Experimental Nuclear Physics** (May 2010)

“Study of Spectroscopic Properties of Proton Rich Nuclei”

Supervisor: Prof. Indira Mehrotra, University of Allahabad, Allahabad, INDIA.

(Experimental work of thesis was done at Inter University Accelerator Centre, New Delhi, India.)

**M.Sc. in Physics**, (2003)

University of Allahabad, Allahabad, INDIA

**B.Sc. in Physics, Chemistry & Mathematics**, (2001)

University of Allahabad, Allahabad, INDIA.

### Professional Training:

Post-Doctoral Fellow, May 2010 to April 2012

Tata Institute of Fundamental Research

Homi Bhabha Road, Mumbai, India

Post-Doctoral Fellow, April 2012 to 22 November 2012

Dept. of Particle Physics & Astrophysics

Weizmann Institute of Science

Rehovot, Israel

## **Research Interests:**

- Nuclear Structure far from stability
- Large Gamma Detector Arrays
- Instrumentation
- Digital signal processing
- Large scale shell-model calculations
- Cranking-model calculations.

## **WORKSHOP/SCHOOL ATTEENDED**

1. National Symposium on particles, detectors and instrumentation TIFR, Mumbai 21-24 March 2012.
2. Workshop/School on Advances in Nuclear Physics at International Centre, Goa organized by International Centre for theoretical Science, TIFR, Mumbai, 7-18 November, 2011.
3. N-N interaction and the nuclear many body problems at TIFR, Mumbai, November, 2010.
4. School cum workshop on nuclear yrast and near yrast spectroscopy at IIT Roorkee, Sept, 2009.
5. Frontiers of gamma ray spectroscopy at TIFR, Mumbai, March 2 – 4, 2009.
6. School on “ Nuclear Structure and Dynamics” at IUAC, New Delhi in Aug 2008
7. Workshop on “Nuclear Structure with INGA at beam hall2 “at IUAC, New Delhi, July, 2007.
8. BRNS workshop on “Ion beam their application in basic sciences” at VECC, Kolkata, September, 2007.
9. Workshop on “Nuclear Structure with LINAC Beam” at IUAC, New Delhi, Sept, 2006.
10. SERC School on “Nuclear Structure at Low and Intermediate Energies” at VECC, Kolkata in March 2006.
11. School on “ Nuclear Structure and Dynamics” at IUC-DAE-CSR, Kolkata in June 2005

## **Invited talks:**

1. Discrete gamma ray spectroscopy with Indian National Gamma Array Weizmann Institute of Science, Rehovot, Israel, Dec, 2011.
2. Indian National Gamma Array & Associated Studies GSI, Darmstadt, Germany. Aug 2011.
3. High Spin Phenomena in Transitional Nuclei by Lifetime Measurements Tata Institute of Fundamental Research, Mumbai, May, 2010.
4. Shape evolution at high spin in 70-80 mass region School cum workshop on Nuclear yrast and near yrast spectroscopy October 26 -30, 2009 at IIT Roorkee.

## List of publications:

### Published in Refereed Journals:

1. Small quadrupole Deformation for the Dipole Bands in  $^{112}\text{In}$   
**T. Trivedi**, R. Palit, J. Sethi, S. Saha, B. S. Naidu, V.V. Parkar, Z. Naik, S. Kumar, D. Choudhury, A.K. Jain, D. Negi, R. Kumar, R. P. Singh, S. Muralithar, and R. K. Bhowmik,  
**Phys. Rev. C. 85, 14327 (2012)**

2. Large scale shell model description of  $^{102-108}\text{Sn}$  isotopes:  
**T. Trivedi**, D.Negi, P.C. Srivastava and I. Mehrotra  
**Intentional Journal of Modern Physics E.21, 1250049 (2012)**

3. Structure of dipole bands in  $^{112}\text{In}$ : Through lifetime measurements;  
**T. Trivedi**, J. Sethi, R. Palit, S. Saha, V.V. Parkar, P.K. Joshi, S. Kumar, Z. Naik, S. Sihotra, D. Mehta, D. Choudhury, A.K. Jain, D.C. Biswas, D. Negi, R. Kumar, R.P. Singh, S. Muralithar, R.K. Bhowmik, H.C. Jain  
**Journal of Physics: Conference Series 381, 012061 (2012)**

4. High Spin Spectroscopy of  $^{109}\text{In}$   
D. Negi, **T. Trivedi**, A. Dhal, S. Kumar, V. Kumar, S. Roy, M. K. Raju, S. Appannababu, G. Mohanto, J. Kaur, R. K. Sinha, D. Choudhury, D. Singh, R. Kumar, R. P. Singh, S. Muralithar, A. K. Bhati, S. C. Pancholi, and R. K. Bhowmik  
**Phys. Rev. C 85, 057301 (2012)**

5. A High Speed Digital Data Acquisition System for the Indian National Gamma Array at Tata Institute of Fundamental Research.  
R. Palit, S.Saha, J Sethi, **T. Trivedi**, S. Sharma, B.S. Naidu, R. Donthi, P.B. Chavan H. Tan, W.Hennig  
**Nucl. Instru. Meth. A. 680, 90 (2012)**

6. Experimental investigation of shell model excitations of  $^{89}\text{Zr}$  up to high spin  
S. Saha, R. Palit, J. Sethi, **T. Trivedi**, P. C. Srivastava, S. Kumar, B. S. Naidu, R. Donthi, S. Jadhav, D. C. Biswas, U. Garg, A. Goswami, H. C. Jain, P. K. Joshi, G. Mukherjee, Z. Naik, S. Nag, V. Nanal, R. G. Pillay, S. Saha, and A. K. Singh  
**Phys. Rev. C 86, 034315 (2012)**

7. Shape evolution in odd-A  $^{137}\text{Pm}$ ;  
A. Dhal, R.K. Sinha, D. Negi, **T. Trivedi**, M.K. Raju, D. Choudhury, G. Mahanto, S. Kumar, J. Gehlot, R. Kumar, S. Nath, S.S. Ghugre, R.P. Singh, J.J. Das, S. Muralithar, N. Madhavan, J.B. Gupta, A.K. Sinha, A.K. Jain, I.M. Govil, R.K. Bhowmik, S.C. Pancholi, L. Chaturvedi,  
**Eur. Phys. J A 48, 28 (2012)**

8. High-spin spectroscopy of  $^{122}\text{I}$   
Purnima Singh, Somnath Nag, K. Selvakumar, A. K. Singh, I.Ragnarsson, Abhijit Bisoi, A. Goswami, S. Bhattacharya, S. Kumar, K. Singh, J. Sethi, Sudipta Saha, **T. Trivedi**, S. V. Jadhav, R. Donthi, B. S. Naidu, and R. Palit  
**Phys. Rev. C 85, 054311 (2012)**

9. High spin band structures in doubly-odd  $^{194}\text{Tl}$ ;

H. Pai, G. Mukherjee, S. Bhattacharyya, M.R. Gohil, T. Bhattacharjee, C. Bhattacharya, R. Palit, S. Saha, J. Sethi, **T. Trivedi**, S. Thakur, A. Goswami, S. Chanda  
**Phys. Rev. C 85, 064313 (2012)**

10. Complete and incomplete fusion in  ${}^9\text{Be}+{}^{124}\text{Sn}$   
V.V. Parkar, R. Palit, S. Sharma, B.S. Naidu, S. Santra, P.K. Joshi, P.K. Rath, K. Mahata, K. Ramachandran, **T. Trivedi**, A. Raghav,  
**Proc. Radiochim Acta 1, 131 (2011)**

11. Indian National Gamma Array at IUAC;  
S. Muralithar, Kusum Rani, Rakesh Kumar, R.P. Singh, J.J. Das, J. Gehlot, K.S. Golda, A. Jhingan, N. Madhavan, S. Nath, P. Sugathan, P. Barua, Arti Gupta, Mamta Jain, Ashok Kothari, B.P. Ajith Kumar, J. Malyadri, U. G. Naik, Raj Kumar, Rajesh Kumar, S. Rao, S.K. Saini, S.K. Suman, A. Dhal, D. Negi, K. Raja, **T. Trivedi**, and R. K. Bhowmik  
**Journal of Physics: Conference Series. 312, 052015 (2011)**

12. Lifetime measurement of high spin states in  ${}^{75}\text{Kr}$ ;  
**T. Trivedi**, D. Negi, R. Palit, Z. Naik, A. Dhal, M. K. Raja, A. Babu, S. Kumar, D. Choudhury, K. Maurya, G. Mahanto, R. Kumar, R. P. Singh, S. Muralithar, A. K. Jain, H. C. Jain, S. C. Pancholi, R. K. Bhowmik and I. Mehrotra,  
**Nucl. Phys. A. 834, 72c (2010)**

13. Fusion cross sections for the  ${}^9\text{Be}+{}^{124}\text{Sn}$  reaction at energies near the Coulomb barrier.  
V.V. Parkar, R. Palit, S. Sharma, B.S. Naidu, S. Santra, P.K. Joshi, P.K. Rath, K. Mahata, K. Ramachandran, **T. Trivedi**, A. Raghav,  
**Phys. Rev. C. 82, 054601 (2010)**

14. Evidence for magnetic rotation in odd-A  ${}^{105}\text{Cd}$ .  
Deepika Choudhury, A.K. Jain, M. Patial, N. Gupta, P. Arumugam, A. Dhal, R.K. Sinha, L. Chaturvedi, P.K. Joshi, **T. Trivedi**, R. Palit, S. Kumar, R. Garg, S. Mandal, D. Negi, G. Mohanto, S. Muralithar, R.P. Singh, N. Madhavan, R.K. Bhowmik, and S.C. Pancholi  
**Phys. Rev. C. 82, 061308 (2010)**

15. Band structure and shape coexistences in  ${}^{135}\text{Ba}$ ;  
Suresh Kumar, A.K. Jain, Alpna Goel, S. S. Malik R. Palit, H. C. Jain, I. Mazumdar, P. K Joshi, Z. Naik, A. Dhal, **T. Trivedi**, I. Mehrotra, A. Babu, L. Chaturvedi, V. Kumar, R. Kumar, D. Negi, R.P. Singh, S. Muralithar, R.K. Bhowmik, S.C. Pancholi,  
**Phys. Rev. C. 81, 067304, (2010)**

16. High spin spectroscopy and shears mechanism in  ${}^{107}\text{In}$ ;  
D. Negi, **T. Trivedi**, A. Dhal, S. Roy, V. Kumar, S. Kumar, R.K. Sinha, R. Kumar, R.P. Singh, S. Muralithar, A.K. Bhati, S.C. Pancholi, R.K. Bhowmik  
**Phys. Rev. C. 81, 054322, (2010)**

17. Indian National Gamma Array in beam hall II at IUAC;  
S. Muralithar, Kusum Rani, Rakesh Kumar, R.P. Singh, J.J. Das, J. Gehlot, K.S. Golda, A. Jhingan, N. Madhavan, S. Nath, P. Sugathan, P. Barua, Arti Gupta, Mamta Jain, Ashok Kothari, B.P. Ajith Kumar, J. Malyadri, U. G. Naik, Raj Kumar, Rajesh Kumar, S. Rao, S.K. Saini, S.K. Suman, A. Dhal, D. Negi, K. Raja, **T. Trivedi**, and R. K. Bhowmik  
**Nucl. Instru. Meth. A. 622, 281 (2010)**

18. Shape evolution of Highly Deformed  $^{75}\text{Kr}$  and Projected shell model description;  
Ying Chun Yang, Yang Sun, **T. Trivedi**, R. Palit, J.A. Sheikh  
**Intentional Journal of Modern Physics E. 19, 1754 (2010)**

19. Shape evolution of the highly deformed  $^{75}\text{Kr}$  nucleus examined with the Doppler-shift attenuation method;  
**T. Trivedi**, R. Palit, D. Negi, Z. Naik, Y.-C. Yang, Y. Sun, J. A. Sheikh, A.Dhal, S. Kumar, D. Choudhury, K. Maurya, G.Mahanto, R.Kumar, R. P. Singh, S. Muralithar, A. K. Jain, H. C. Jain, S. C.Pancholi, R. K. Bhowmik, and I. Mehrotra,  
**Phys. Rev. C. 80, 047302, (2009)**