Faculty Details proforma for DU Web-site

Title	Dr.	First Name	SHASHI	Last Name	VERMA	Photograph
Designation		**Assistant Professor**				
Address		Department of Physics and Asrophysics University of Delhi, Delhi-110007				
Phone No Office		+91-11-27667725				
Residence		H.No -2, Type IV, Teacher flats, Department of Social Work, University of Delhi				
Mobile						
Email		sverma@physics.du.ac.in, vermasvin2006@gmail.com				
Web-Page						

Educational Qualifications

Degree	Institution	Details	Year
Ph.D.	University of Delhi	Experimental Nuclear Physics: Thesis topic : Study of Nuclear Reactions induced by Radioactive Ion Beams	2001-2007
Pre Ph. D.	Inter University Accelerator Centre (Formerly Nuclear Science Centre), New Delhi	Accelerator based Experimental Nuclear Physics techniques, Nuclear Physics Theory	2001
PG	University of Delhi, Hindu College	Physics	1999-2001
UG	University of Delhi, Gargi College	Physics (Hons)	1999
Any other qualification	NIIT, Gargi College Centre, New Delhi	Two years diploma in Network centered Computing (Professional Diploma ,2yrs)	1996-1999

Career Profile

Designation	Organisation/Institution	Role	Duration
Assistant Professor	University of Delhi	Teaching & Research	5th June 2008- till date
Post Doctorate Fellow	Universidad de Santiago de Compostela, Spain	Research	2007-2008
Senior Research Fellow, Council of Scientific and Industrial Research	University of Delhi	Research	2003-2006
Junior Research Fellow, Council of Scientific and Industrial Research	University of Delhi	Research	2001-2003

Administrative Assignments

Areas of Interest / Specialization

Experimental Nuclear Physics

- Nuclear reactions: Nuclear reactions involving Radioactive Ion Beam

  a) Influence of break-up of weakly bound nuclei (^{7}Be, ^{7}Li) on elastic and fusion reaction channels.

  b) Optical model analysis on the available ^{14}C + ^{14}C and ^{14}C + ^{12}C elastic scattering data, using both shallow and deep

potential, using modified optical model code GENOA.

- Experience with Radioactive Ion Beam facility and developing, testing of associated detector systems (Si-Surface Barrier Detectors and Gas Detectors for particle identification) for RIB experiments.
- Nuclear Spectroscopy: Beta decay half-lives and nuclear structure of heavy neutron rich nuclei produced by ^{208}Pb fragmentation. Actively involved in experiments carried at GSI, Germany during stopped beam campaign using RISING (Gamma Detector Array).

Subjects Taught

Nuclear Physics Theory
Nuclear and Particle Physics.
Quantum Physics-I, II
Experimental Nuclear Physics Laboratory
Radiation Detection & Measurement

Research Guidance

Publications Profile

1. *Research papers published in Refereed/Peer Reviewed Journals*

Year of Publication	Title	Journal	Co-Author
2015	Negative-parity high-spin states and a possible magnetic rotation band in Pr7659135	Phys. Rev. C 92, 054325	Ritika Garg, S. Kumar, Mansi Saxena, Savi Goyal, Davinder Siwal, Sunil Kalkal, S. Verma, R. Singh, S. C. Pancholi, R. Palit, Deepika Choudhury, S. S. Ghugre, G. Mukherjee, R. Kumar, R. P. Singh, S. Muralithar, R. K. Bhowmik, and S. Mandal
2015	Probing nuclear dissipation via evaporation residue excitation functions for the $O^{16,18}$+Pt^{198} reactions	Phys. Rev. C 91, 044621	Rohit Sandal, B. R. Behera, Varinderjit Singh, Maninder Kaur, A. Kumar, Gurpreet Kaur, P. Sharma, N. Madhavan, S. Nath, J. Gehlot, A. Jhingan, K. S. Golda, Hardev Singh, S. Mandal, S. Verma, E. Prasad, K. M. Varier, A. M. Vinodkumar, A. Saxena, Jhilam Sadhukhan, and Santanu Pal
2014	Half-Life Systematics across the N=126 Shell Closure: Role of First-Forbidden Transitions in the β Decay of Heavy Neutron-Rich Nuclei	Phys. Rev. Lett. 113, 022702	A. I. Morales, J. Benlliure, T. Kurtukián-Nieto, K.-H Schmidt, S. Verma, P. H. Regan, Z. Podolyák, M. Górska,S. Pietri, R. Kumar, E. Casarejos,N. Al-Dahan, A. Algora, N. Alkhomashi, H. Álvarez-Pol, G. Benzoni, A. Blazhev, P. Boutachkov, A. M. Bruce, L. S. Cáceres, I. J. Cullen, A. M. Denis Bacelar, P. Doornenbal,M. E. Estévez-Aguado, G. Farrelly, Y. Fujita, A. B. Garnsworthy,W. Gelletly, J. Gerl, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Lalkovski, Z. Liu, C. Mihai, F. Molina, D. Mücher, B. Rubio, H. Shaffner, S J. Steer, A. Tamii, S. Tashenov, J. J. Valiente-Dobón, P. M. Walker,H. J. Wollersheim, and P. J. Woods
2013	The population of metastable states as a probe of relativistic-energy fragmentation reaction	Phys. Lett. B 723, 302	A.M.DenisBacelar,A.M.Bruce,Zs.Podolyák,N.Al-Dahan,M.Górska,S.Lalkovski,S.Pietri,M.V.Ricciardic,A.Algora,N.Alkhomashi,J.Benlliure,P.Boutachkov,A.Bracco,E.Calore,E.Casarejos,I.J.Cullen,A.Y.Deo,P.Detistov,Zs.Dombradi,C.Domingo-Pardo,M.Doncel,F.Farinon,G.F.Farrelly,H.Geissel,

			W.Gelletly,J.Gerl,N.Goel,J.Grebosz,R.Hoischen,I. Kojouharov,N.Kurz,S.Leoni,F.Molina,D.Montanar i,A.I.Morales,A.Musumarra,D.R.Napoli,R.Nicolin i,C.Nociforo,A.Prochazka,W.Prokopowicz,P.HRe gan,B.Rubio,D.Rudolph,K.Schmidt,H.Schaffner,S. J.Steer,K.Steiger,P.Strmen,T.P.D.Swan,I.Szarka,J. J.ValienteDobón,S.Verma,P.M.Walker,H.Weick, H.J.Wollersheim
2013	High spin states in $^{135}_{57}La_{78}$	Phys. Rev. C 87, 034317	Ritika Garg, S. Kumar, Mansi Saxena, Savi Goyal, Davinder Siwal, S. Verma, R. Palit, Sudipta Saha, J. Sethi, Sushil K. Sharma, T. Trivedi, S. K. Jadav, R. Donthi, B. S. Naidu, and S. Mandal
2012	Measurements and coupled reaction channels analysis of one- and two-proton transfer reactions for the $^{28}Si + ^{90,94}Zr$ systems	Phys. Rev. C 85, 034606	Sunil Kalkal, S. Mandal, A. Jhingan, J. Gehlot, P. Sugathan, K. S. Golda, N. Madhavan, Ritika Garg, Savi Goyal, Gayatri Mohanto, Rohit Sandal, Santosh Chakraborty, Shashi Verma, Bivash Behera, G. Eleonora, H. J. Wollersheim, and R. Singh
2011	Synthesis of N=127 isotones through (p,n) charge-exchange reactions induced by relativistic 208Pb projectiles	Phys. Rev. C 84, 011601(R)	A.I. Morales,J. Benlliure, J. Agramunt, A. Algora, N. Alkhomashi, H. Alvarez-Pol, P. Boutachkov, A.M. Bruce, L.S. Caceres, E. Casarejos, A.M. Denis Bacelar, P. Doornenbal, D. Dragosavac, G. Farrelly, A. Gadea, W. Gelletly, J. Gerl, M. Gorska, J. Grebosz, I. Kojouharov, D. P´erez-Loureiro, S. Pietri, Z. Podolyak, F. Molina, P.H. Regan, B. Rubio, H. Sharner, S.J. Steer, S. Tashenov, S. Verma, H.J. Wollersheim
2011	Multinucleon transfer reactions for the $^{28}Si+^{90,94}Zr$ systems in the region below and near the Coulomb barrier	Phys. Rev. C 83, 054607	Sunil Kalkal, S. Mandal, N. Madhavan, A. Jhingan, E. Prasad, Rohit Sandal, S. Nath, J. Gehlot, Ritika Garg, Gayatri Mohanto, Mansi Saxena, Savi Goyal, S. Verma, B. R. Behera, Suresh Kumar, U. D. Pramanik, A. K. Sinha, R. Singh
2010	Channel coupling effects on the fusion excitation functions for $^{28}Si+^{90,94}Zr$ in sub- and near-barrier regions	Phys. Rev. C 81, 044610	Sunil Kalkal, S. Mandal, N. Madhavan, E. Prasad, Shashi Verma, A. Jhingan, Rohit Sandal, S. Nath, J. Gehlot, B. R. Behera, Mansi Saxena, Savi Goyal, Davinder Siwal, Ritika Garg, U. D. Pramanik, Suresh Kumar, T. T. Varughese, K. S. Golda, S. Muralithar, A. K. Sinha, R. Singh
2010	Interaction of loosely bound radioactive ^{7}Be and stable ^{7}Li with ^{9}Be	Eur. Phys. J. A 44, 385–392	S. Verma, J.J. Das, A. Jhingan, K. Kalita, S. Barua, K.S. Golda, N. Madhavan,P. Sugathan, S. Nath, T. Varughese, J. Gehlot, S. Mandal, Ranjit, P.K. Sahu, B. John, B.K. Nayak, V. Jha, A. Saxena, S.K. Datta and R.Singh
2009	Nuclear structure "southeast" of ^{208}Pb: Isomeric states in	Phys. Rev. C 80, 061302(R)	N. Al-Dahan, Zs. Podolyák, P. H. Regan, M. Górska, H. Grawe, K. H. Maier, J. Gerl, S. B. Pietri, H. J. Wollersheim, N. Alkhomashi, A. Y.

	^{208}Hg and ^{209}Tl		Deo, A. M. Denis Bacelar, G. Farrelly, S. J. Steer, A. M. Bruce, P. Boutachkov, C. Domingo-Pardo, A. Algora, J. Benlliure, A. Bracco, E. Calore, E. Casarejos, I. J. Cullen, P. Detistov, Zs. Dombrádi, M. Doncel, F. Farinon, W. Gelletly, H. Geissel, N. Goel, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Lalkovski, S. Leoni, F. Molina, D. Montanari, A. I. Morales, A. Musumarra, D. R. Napoli, R. Nicolini, C. Nociforo, A. Prochazka, W. Prokopowicz, B. Rubio, D. Rudolph, H. Schaffner, P. Strmen, I. Szarka, T. Swan, J. S. Thomas, J. J. Valiente-Dobón, ,S. Verma P. M. Walker, and H. Weick
2009	Beta -Delayed gamma -Ray spectroscopy of Heavy Neutron Rich Nuclei "South" of Lead	Acta Physica Polonica B, Vol. 40, No. 3, 867	A.I. Morales, J. Benlliure, P.H. Regan, Z. Podolyák, M. Górska, N. Alkhomashi, S. Pietri, R. Kumar, E. Casarejos, J. Agramunt, A. Algora, H. Álvarez-Pol, G. Benzoni, A. Blazhev, P. Boutachkov, A.M. Bruce, L.S. Cáceres, I.J. Cullen, A.M. Denis Bacelar, P. Doornenbal, D. Dragosavac, M.E. Estévez, G. Farrelly, Y. Fujita, A.B. Garnsworthy, W. Gelletly, J. Gerl, J. Grębosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Lalkovski, Z. Liu, D. Pérez-Loureiro, W. Prokopowicz, C. Mihai, F. Molina, D. Mücher, B. Rubio, H. Schaffner, S.J. Steer, A. Tamii, S. Tashenov, J.J. Valiente Dobón, S. Verma, P.M. Walker, H.J. Wollersheim, P.J. Woods
2009	Isomeric States in ^{208}Hg and ^{209}Tl Populated in Fragmentation of ^{238}U	Acta Physica Polonica B, Vol. 40, No. 3, 871	N. Al-Dahan, Zs. Podolyák, P.H. Regan, S.J. Steer, A.M. Denis Bacelar, N. Alkhomashi, M. Górska, J. Gerl, H.J. Wollersheim, S.B. Pietri, H. Grawe, A.Y. Deo, G. Farrelly, P. Boutachkov, C. Domingo-Pardo, A. Algora, J. Benlliure, A. Bracco, A.M. Bruce, E. Calore, E. Casarejos, I.J. Cullen, P. Detistov, Z. Dombrádi, M. Doncel, F. Farinon, H. Geissel, W. Gelletly, N. Goel, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Lalkovski, S. Leoni, F. Molina, D. Montanari, A.I. Morales, A. Musumarra, D.R. Napoli, R. Nicolini, C. Nociforo, A. Prochazka, W. Prokopowicz, B. Rubio, D. Rudolph, H. Schaffner, P. Strmen, I. Szarka, T. Swan, J.J. Valiente-Dobon, S. Verma, P.M. Walker, H. Weick
2009	Angular Momentum Population in Fragmentation Reactions	Acta Physica Polonica B, Vol. 40, No. 3	A.M. Denis Bacelar, A.M. Bruce, Zs. Podolyák, S. Lalkovski, S. Pietri, N. Al-Dahan, M. Górska, A. Algora, N. Alkhomashi, J. Benlliure, P. Boutachkov, A. Bracco, E. Calore, E. Casarejos, I.J. Cullen, A.Y. Deo, P. Detistov, Z. Dombradi, C. Domingo-Pardo, M. Doncel, F. Farinon, G.F. Farrelly, H. Geissel, W. Gelletly, J. Gerl, N. Goel, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Leoni, F. Molina, A.I. Morales, D. Montanari, A. Musumarra, R. Nicolini, D.R. Napoli, C. Nociforo, A. Prochazka, W. Prokopowicz, P.H.

			Regan, B. Rubio, D. Rudolph, S. Verma, S.J. Steer, P. Strmen, T.P.D. Swan, I. Szarka, J.J. Valiente-Dob, P.M. Walker, H. Weick, H.J. Wollersheim
2006	Elastic scattering and fusion cross sections for ^{7}Be, ^{7}Li + ^{27}Al systems	Physical Review C 73, 024609	K. Kalita, S. Verma, R. Singh, J. J. Das, A. Jhingan, N. Madhavan, S. Nath, T. Varughese, P. Sugathan, V. V. Parker, K. Mahata, K. Ramachandran, A. Shrivastava, A. Chaterjee, S. Kailas, S. Barua, P. Basu, H. Majumdar, M. Sinha, R. Bhattacharya, A. K. Sinha
2006	Fission hindrance studies in ^{208}Pb : Evaporation residue cross section and spin distribution measurements	Physical Review C 74, 064603	P. D. Shidling, N. M. Badigar, S. Nath, R. Kumar, A. Jhingan, R. P. Singh, P. Sugathan, A. K. Sinha, Santanu Pal, S. Kailas, S. Verma, K. Kalita, S. Mandal, R. Singh, B. R. Behera, K. M. Varier, M. G. Radhakrishnan
2005	Charge exchange reaction between mirror nuclei ^{7}Be and ^{7}Li	Physical Review C 72, 044602	S. Barua, J. J. Das, A. Jhingan, T. Varughese, N. Madahavan, K. Kalita, S. Verma, P. Sugathan, B. Bhattacharjee, S. K. Datta, K. Baruah.
2005	Development of high efficiency annular detector system for RIB experiments at NSC	Nuclear Instrumentation Methods A539, 269	A. Jhingan, S. Barua, J. J. Das, T. Varughese, P. Sugathan, N. Madhavan, S. Nath, K. Kalita, S. Verma
2004	Study of elastic scattering of mirror nuclei ^{7}Be + ^{7}Li	Nuclear Physics A746, 467c	S. Barua, J. J. Das, A. Jhingan, T. Varughese, N. Madhavan, P. Sugathan, S. Verma, K. Kalita, B. Bhattacharjee, S. K. Datta, K. Boruah.
2005	Development of a large area telescopic detector system for elastic scattering and transfer reaction angular distribution measurements	Indian Journal of Pure and Applied Physics 43, 567-572, August 2005	K. Kalita, A. Jhingan, S. Barua, J. J. Das, T. Varughese, P. Sugathan, N. Madhavan, S. Nath, S. Verma, R. Singh.

2.

a) *Research papers published in Refereed/Peer Reviewed Conferences*

2007	Measurements of elastic scattering for ^{7}Be, ^{7}Li + ^{9}Be systems and fusion cross sections for ^{7}Li + ^{9}Be system	Eur. Phys. J. Special Topics 150, 75–78	S. Verma, J.J. Das, A. Jhingan, K. Kalita, S. Barua, K.S. Golda, N. Madhavan, P. Sugathan, S. Nath, T. Varughese, J. Gehlot, S. Mandal, Ranjit, P.K. Sahu, B. John, B.K. Nayak, A. Saxena, S.K. Datta, and R. Singh

b) *Research papers Published in Conferences/Seminar other than Refereed/Peer Reviewed Conferences*

Conference Organization/ Presentations (in the last three years)

Zakopane Conference on Nuclear Physics (September 1-7, 2008), Poland

1) Reaction mechanism studies of highspin states produced in projectile fragmentation
- A.M. Denis Bacelar, A.M. Bruce, Zs. Podolyák, S. Lalkovski, M. Górska, S. Pietri, N. AlDahan, A. Algora, N. Alkhomashi, J. Benlliure, P. Boutachkov, E. Casarejos, I.J. Cullen, A. Deo, P. Detistov, M. Doncel, G.F. Farrelly, H. Geissel, W. Gelletly, J. Gerl, J. Grebosz, I. Kojouharov, F. Molina, D.R. Napoli, A.I. Morales, P.H. Regan, B. Rubio, S. Verma, S.J. Steer, T.P.D. Swan, J.J. ValienteDobón, P.M. Walker, H.J. Wollersheim

2) Nuclear structure study of heavy neutron-rich nuclei close to the N=126 closed shell with the RISING spectrometer
- presented by Ana Isabel Morales (University of Santiago di Compostela)

3) Structure of N=126 nuclei produced in fragmentation of ^{238}U – presented by N. Al-Dahan

4) 13th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics

Structure of N>=126 nuclei produced in fragmentation of ^{238}U - N. Al-Dahan, Zs. Podolyák, P.H. Regan, S. J. Steer, N. Alkhomashi, A. M. Denis Bacelar, M. Górska, S. B. Pietri, W. Gelletly, P. M. Walker, G. Farrelly, A. I. Morales, A. Y. Deo, I. J. Cullen, J. Gerl, C. Domingo-Pardo, S. Verma, T. Swan, H. J. Wollersheim, A. M. Bruce, S. Lalkovski, J. Benlliure, A. Algora, P. Boutachkov, A. Bracco, E. Calore, E. Casarejos, P. Detistov, Z. Dombrádi, M. Doncel, F. Farinon, H. Geissel, N. Goel, J. Grebosz, R. Hoischen, I. Kojouharov, S. Leoni, F. Molina, D. Montanari, A. Musumarra, R. Nicolini, D. R. Napoli, C. Nociforo, B. Rubio, A. Prochazka, D. Rudolph, P. Strmen, I. Szarka, J. J. Valiente-Dobon, H. Weick.

5) Euro summer school on exotic beams (26-31 August 2007) Houlgate, France

Poster presentation on "Exploring neutron rich nuclei with Z<82 & N<126, South of ^{208}Pb"

Total Publication Profile optional

Year 2003-2015

Reviewed Journals ~19, Conferences and symposia ~30 , Invited talks and Seminars ~ 10

Research Projects (Major Grants/Research Collaboration)

Awards and Distinctions

GATE – 2001 : Qualified Graduate Aptitude Test in Engineering (GATE-2001) in Physics held on February 11, 2001 conducted by Indian Institute of Technology, Kanpur, India.

JRF-NET-2000 : Qualified joint CSIR-UGC Junior Research Fellowship (JRF) and Eligibility for Lectureship- National Eligibility Test (NET) held on 31.12.2000 in Physical Sciences conducted by CSIR-UGC, India.

Association With Professional Bodies

Other Activities

Invited Talks and Seminars Seminar on "Elastic scattering measurements for ^{7}Be, ^{7}Li + ^{9}Be system and fusion measurement for ^{7}Li + ^{9}Be system using low energy Radioactive Ion Beam facility" at various European Labs (2006):

* Laboratori Nazionali del Sud (LNS), Catania, Italy.

* Laboratori Nazionali del Leganro (LNL), Padova, Italy.

* Gesellschaft fur Schwerionenforschung mbH (GSI), Darmstadt, Germany.

* Institut Pluridiscplinaire Hubert Curien (IPHC), Strasbourg, France. * Grand Accelerateur National d Ions Lourds (GANIL), CAEN, France