


Name:	Dr. Dalip Singh Verma	
Contact Details:	94591-35080	
Academic Qualification:	M. Phil, Ph. D., NET	
Positions Held:	Assistant Professor	
Specialisation:	Theoretical Nuclear Physics	
Research Interest:	Low energy Heavy Ion Nuclear Reactions	
Books		
<p>1. Handbook of Materials Characterization, Surender Kumar Sharma, Dalip Singh Verma, Latif Ullah Khan, Shalendra Kumar and Sher Bahadar Khan, ISBN 978-3-319-92954-5, ISBN 978-3-319-92955-2 (eBook) https://doi.org/10.1007/978-3-319-92955-2</p>		
Publications		
<p>1. Investigation of the cold valley paths for the synthesis of isotopes of U_h in optimum orientations, Dalip Singh Verma, Kushmakshi, Nuclear Physics A 1007 (2021) 122129, https://doi.org/10.1016/j.nuclphysa.2020.122129</p> <p>2. Fission partition a reflection of shell closures: Decay of ^{220,224}U* at eight excitation energies, Dalip Singh Verma, Nuclear Physics A 1003 (2020) 122031. https://doi.org/10.1016/j.nuclphysa.2020.122031</p> <p>3. Angular momentum as a probe for the reaction mechanism: The ⁸⁸Mo* decay at three excitation energies, Dalip Singh Verma and Kushmakshi, Nuclear Physics A, 995 (2020) 121690. https://doi.org/10.1016/j.nuclphysa.2019.121690</p> <p>4. Decay of hot and rotating ⁸⁸Mo* at incident energies of 300, 450 and 600 MeV, Dalip Singh Verma and Kushmakshi, Physics of Atomic Nuclei, 2020, Vol. 83, No. 3, pp. 407–417. https://doi.org/10.1134/S1063778820030151</p>		

5. Isospin influence on the decay of compound nuclei formed in $^{78,82}\text{Kr} + ^{40}\text{Ca}$ and $^{76,86}\text{Kr} + ^{40,48}\text{Ca}$ reactions,
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6. Hot fusion of fission fragments for the synthesis of doubly magic nucleus $^{310}_{126}\text{X}^{184}$,
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7. Sub-barrier fusion cross-sections for $^{32}\text{S} + ^{90,96}\text{Zr}$, using the semiclassical extended Thomas-Fermi approach of Energy Density Formalism,
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8. Universal functions of nuclear proximity potential for Skyrme nucleus-nucleus interaction in a semiclassical approach,
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9. Dynamical Model for the Decay of Hot and Rotating Compound Nucleus,
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10. Clusters in light, heavy, super-heavy and super-superheavy nuclei
 R. K. Gupta, S. K. Arun, **Dalip Singh**, Raj Kumar, Nityi, S. K. Patra, P. Arumugam and B. K. Sharma,
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14. Dynamical cluster-decay model for hot and rotating light-mass nuclear

- systems, applied to the low-energy $^{32}\text{S}+^{24}\text{Mg}$ $^{56}\text{Ni}^*$ reaction,
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15. Collective clusterization effects in light heavy ions reactions,
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 16. Compactness based suitability of the target-projectile combinations for the
 synthesis of $^{310}_{126}\text{X}^{184}$, *Dalip Singh Verma, Shikha Awasthi*
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 19. Isospin effects on the mass and charge distributions in the decay of $^{118,134}\text{Ba}^*$
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 energetic beams in sciences ARCEB-2018, page 273-274.
 21. Isospin effects on the decay of $^{118,122,134}\text{Ba}^*$ isotopes,
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 22. Orientation effects in the fusion of $^{28}\text{Si}+^{28}\text{Si}$ system using SEDF,
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27. The fusion excitation function for a positive Q-value system at near and deep sub-barrier energies using Skyrme energy density formalism, Atul Choudhary and **Dalip Singh Verma**, Proceedings of the DAE Symp. on Nucl. Phys. **60** (2015) 572.
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35. Role of moment of inertia and of limiting angular momentum in heavy ion collisions,
Raj Kumar, **Dalip Singh**, Niyti Sharma and Raj K. Gupta,
2nd Chandigarh Science Congress, Panjab University, Chandigarh. (India) 2008.
 36. Dynamical Model for the decay of hot and rotating compound nucleus,
R. K. Gupta, **Dalip Singh**, Raj Kumar and Niyti Sharma,
International Conference on New Aspects of Heavy Ion Collisions Near the Coulomb Barrier, September 22-26, 2008, Chicago, USA.
 37. Isospin effects in decay of $^{116-122}\text{Ba}^*$ nuclei,
R. K. Gupta, **Dalip Singh**, Sham K. Arun and Raj Kumar,
5th International conference on Exotic Nuclei and Atomic masses, September 07-13, 2008, Ryn, Poland (ENAM08).
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 40. Fusion Cross-sections for Light and Super-heavy Systems using Proximity Solution of Nucleus-nucleus Interaction Potential in Semiclassical Approach,
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2nd International Conference on Frontiers in Nuclear Structure, Astrophysics and Reactions, Aghios Nikolaos, Crete, Greece, September 10-14, 2007.
 41. Fusion cross-sections using the semiclassical approach to energy density formalism,
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Proceedings of the DAE Symp. on Nucl. Phys., **51**, 429 (2006).
 42. Emission of Carbon nuclei from $^{56}\text{Ni}^*$ formed in $^{32}\text{S}+^{24}\text{Mg}$ reaction.
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 43. Decay of hot and rotating compound nuclei using energy density formalism.
Dalip Singh, S. K. Arun and R.K. Gupta,
Int. Workshop on "Nuclear Structure at the Extremes: New directions", March 21-24, 2005, H.P.U. Shimla, (India).
 44. Entrance channel effects using the dynamical cluster-decay model: Decay of $^{48}\text{Cr}^*$.
M. K. Sharma, B. B. Singh, **Dalip Singh** and R.K. Gupta,
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<p>Dalip Singh, S.K. Arun, M. Balasubramaniam and R.K. Gupta, Proceedings of the DAE Symp. on Nucl. Phys., 47B (2004) 214.</p> <p>46. Dynamical collective clusterization in hot and rotating nuclei. R.K. Gupta, M. Balasubramaniam, R. Kumar, Dalip Singh, C. Beck and W. Greiner, Contribution to International Conference on Nuclear Data for Science & Technology, Santa Fe, New Mexico, USA, Sept. 26 - Oct. 1, 2004.</p> <p>47. Dynamical cluster-decay model for hot and rotating $^{116}\text{Ba}^*$. R. Kumar, M. Balasubramaniam, Dalip Singh and R. K. Gupta, Proceedings of the DAE Symp. on Nucl. Phys., 46B (2003) 252.</p> <p>48. Role of temperature in spin-orbit density part of the interaction potential. Dalip Singh and R. K. Gupta, Proceedings of the DAE Symp. On Nucl. Phys., 46B, (2003) 254.</p> <p>49. Collective clusterization effects in light heavy ion reactions. R.K. Gupta, M. Balasubramaniam, R. Kumar, Dalip Singh and C. Beck, Contribution, The 8th International Conference on Clustering Aspects of Nuclear Structure and Dynamics, 24-29 November 2003, Nara, Japan.</p>	
PG Project dissertation Supervised	28
M.Phil./Ph.D. Supervised/Supervising:	01 (Thesis submitted), 01 (supervising)
Participation in Seminars/Conferences/workshop/invited talk etc.	
<ol style="list-style-type: none"> Two days workshop on “Indian Mathematics” organized by Department of Mathematics, CUHP, during September 13-14, 2019. National Workshop on “In Silico Approach for Modelling New Materials: Methodology & applications” organized by DPAS, CUHP during 14th – 20th January, 2019. Resource Person for the Project evaluation in 26th state level Himachal Pradesh Children Science Congress-2018, during 9th – 12th October, 2018. XXII National Symposium (NSU-2017) on “Advances in Ultrasonics and Materials Research”, held during November 8-10, 2017, organised by Department of Physics and Astronomical Science and Ultrasonic Society of India. School on “Gravitation and Astroparticle Physics”, organized by CUHP and IUCAA, Pune, from 29-02-2016 to 12-03-2016. Three days workshop on “Computerisation Experiments in Physics” 	

organized jointly by CUHP and IUAC, New Delhi, from 17th to 19th March, 2016.

7. One Week Faculty Development Programme on **“Emerging Trends of ICT in Higher Education”** from 9th -15th June, 2016.
8. Two day workshop on **“Experimental Physics”** held during 4th to 5th April, 2016 at Department of Physics and Astronomical Science, CUHP.
9. Two days workshop on **“Recent Trends in Modern Materials”**, organised by Department of Physics and Astronomical Science, CUHP during March 11-12, 2015.
10. National Conference on **“Emerging Challenges in Physics & Nano Science”**, during 4th March, 2015 at DAV College Dasuya, District Hoshiarpur Punjab (**Invited talk**).
11. Two days International Conference on **“Emerging Trends in Basic and Applied Sciences”** held during May 1-2, 2015, at MAU, Baddi, (H.P.)-India.
12. Invited talk on **“Scientific typesetting software ‘Latex for Publications’** in One day workshop on scientific writing and presentation on 20th March, 2015 at CUHP.
13. Organised Three day workshop on **“Physics Experiments Using Data Acquisition Kit EXPEYES”** during 6th to 8th November, 2014 at CUHP.
14. One week Workshop on **“Analytical Aspects of Dynamics”**, held during 11th November, 2014 to 17th November, 2014 at CUHP.
15. One day National Workshop on **“Astronomy & Astrophysics”** jointly organized by NSCBM Govt. Post Graduate College Hamirpur (H.P.) and Inter-University Center for Astrophysics, Pune, Pune University, Maharashtra held on 15th October, 2012.
16. International Conference on **“Recent Trends in Nuclear Physics”**, held during 19-21st Nov, 2012 at CITTkara University Himachal Pradesh.
17. National workshop on **“Mathematica: An integrated Environment for Computer Simulation in Physics and Mathematics”** held on 28th -30th July, 2011 at Chitkara University, Himachal Pradesh.
18. DAE-BRNS Nuclear Physics Symposium held at Andhra University, Visakhapatnam, during December 26-30, 2011.
19. 11th Punjab Science congress, at Thapar University, Patiala, Feb 7-9, 2008.
20. Diamond Jubilee National Seminar on **Advances in Physics**, Feb 28-March 1, 2008, Department of Physics, Panjab University, Chandigarh.
21. 2nd Chandigarh Science Congress, Panjab University, Chandigarh. (India),

March 14-15, (2008).

22. One day seminar on **“Emerging Interactive Sciences: Road to Global Development”** held at Govt. College for Girls, Sector 11, Chandigarh on August 23, 2008.
23. 1st Chandigarh Science Congress, Panjab University, Chandigarh. (India), March 10-11, (2007).
24. International Symposium on Heavy Ion Physics 2006 **“ISHIP2006”** Frankfurt Institute for Advanced Studies (FIAS), Johann Wolfgang Goethe-University, Frankfurt, Germany, April 3-6, 2006.
25. International Workshop on **“Nuclear Structure Physics at The Extreme: New Direction” (NUSPE’05)**, March 21-24th, 2005, H.P. University, Shimla-5.
26. 91st Session of Indian Science Congress Association, jointly organized by Panjab University and I.M. Tech. Chandigarh, Jan. 3-7, 2004.
27. DAE-BRNS Symposium on Nucl. Phys., Dec. 6-10, 2004, at BHU, Varanasi.
28. DAE-BRNS Symposium on Nucl. Phy., Dec. 8-12, 2003, BARC, Mumbai.
29. National Level School on **“Nuclear reaction and Structure Studies with Low energy Stable and Unstable Heavy ion Beams”** Sept. 25-29, 2000, a joint venture of NSC, New Delhi and H.P.U. Shimla.

Membership of Learned Societies/ Professional Bodies:

Associated Young Scientist Member of Humboldt Academic Club, Chandigarh.

Awards & Honours Received

1. JRF and SRF under the Department of Science and Technology Projects (Dec, 2002-June, 2006 and Dec, 2006-August, 2008)
2. Research stay at Frankfurt Institute of Advance Study (1st January, 2006 to 15th April, 2006) under the Deutsche Forschungsgemeinschaft (DFG) grant Associated with Mercator Professorship.

Others:

Certification Course on the Radiation Safety Aspects in the Research Applications of Ionizing

	Radiation , from BARC, Mumbai-400085 (India).
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