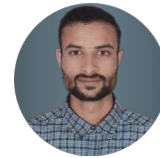


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Currently Pursuing Ph.D. (Physics) from Central University of Himachal Pradesh, Dharamshala

Educational Qualifications:

S. No.	Year	Name of Institute	Examination Passed	Percentage /CGPA
1	2020	IIT Delhi	GATE	
2	2019	Himachal Pradesh Public Service Commission	SET	
3	2019	Central University of Himachal Pradesh	PG	78%
4	2017	Govt. College Banjar (HPU Shimla)	UG	81%
5	2014	Govt. Sr. Sec. School Banjar (HPBOSE Dharamshala)	12th	82%
6	2012	Govt. Sr. Sec. School Jibhi (HPBOSE Dharamshala)	10th	86%

Research Experience

- Authored 10 publications in reputable international journals.
- Two papers were authored and published at the 66th National DAE Symposium on Nuclear Physics.

Interests

- Engaging in Book Reading
- Basic physics problems are tackled using programming in Scilab, Python, and Fortran

Skills

- **Programming:** Python, Scilab, Fortran.
- **Data Visualization:** Gnumeric, Libre Office Calc, Gnuplot, Xmgrace.
- **Modeling:** Numerical Methods in Computational Physics.

Research Publications in International Journals

	Title	Authors	Publication	Volume	Number	Pages	Year	Publisher
1	Deuteron structure and form factors: Using an inverse potential approach	Khachi, Anil; Lalit Kumar , MR Ganesh Kumar, and O. S. K. S. Sastri.	Physical Review C	107	6	64002	2023	APS
2	Alpha-Alpha Scattering Potentials for Various-Channels Using Phase Function Method	Khachi, Anil; Kumar, Lalit ; Sastri, OSKS;	Phys. At. Nucl.	85	4	382-391	2022	Pleiades Publishing Moscow
3	An Innovative Approach to Construct Inverse Potentials Using Variational Monte-Carlo and Phase Function Method: Application to np and pp Scattering	Sastri, OSKS; Khachi, Anil; Kumar, Lalit ;	Braz. J. Phys.	52	2	58	2022	Springer US New York
4	Neutron-Proton Scattering Phase Shifts in S-Channel using Phase Function Method for Various Two Term Potentials	Khachi, Anil; Kumar, Lalit ; Sastri, OSKS;	J. Nucl. Phys. Mat.	9	1	87-93	2021	
5	Deuteron Structure and Form Factors: Using Inverse Potentials for S-waves	Khachi, Anil; Kumar, Lalit ; Kumar, MR; Sastri, OSK;	arXiv preprint arXiv:2209.03575				2022	
6	Phase Shift Analysis for Alpha-alpha Elastic Scattering using Phase Function Method for Gaussian Local Potential	Khachi, Anil; Sastri, OSKS; Kumar, Lalit ; Sharma, Aditi;	J. Nucl. Phys. Mat.	9	1	1-5	2021	
7	Phase Shift Analysis of Light Nucleon-Nucleus Elastic Scattering using Reference Potential Approach	Kumar, Lalit ; Awasthi, Shikha; Khachi, Anil; Sastri, OSK;	arXiv preprint arXiv:2209.00951				2022	
8	Phase Shift Analysis for Neutron-Alpha Elastic Scattering	Kumar, Lalit ; Khachi, Anil;	J. Nucl. Phys. Mat.	9	2	215-221	2022	

	Using Phase Function Method with Local Gaussian Potential	Sastri, OSKS;					
9	Recalculated Viola-Seaborg Coefficients for Partial Alpha Half-lives Based on AME2016	Kumar, Lalit; Gora, Swapna; Rana, Vikram; Khachi, Anil; Sastri, OSKS;	J. Nucl. Phys. Mat.	9	1	37-42	2021
10	3He- α Elastic Scattering Phase Shifts in Various Channels Using Phase Function Method with Morse Potential	Khachi, Anil; Sastri, OSKS; Kumar, Lalit;	J. Nucl. Phys. Mat.	9	2	161-167	2022
11	Triton scattering phase-shifts for S-wave using Morse potential	Khachi, Anil; Awasthi, Shikha; Sastri, OSKS; Kumar, Lalit;	J. Nucl. Phys. Mat.	9	1	81-85	2021
12	Neutron-Proton Interaction Modeled using Morse Function: Constructing Inverse Potentials Using Variational Monte-Carlo and Phase Function Method	Khachi, Anil; Kumar, Lalit; Sastri, OSKS;	arXiv preprint arXiv:2104.14788				2021
13	Simulation of vibrational spectrum of diatomic molecules using Morse potential by matrix methods in gnumeric worksheet	Sastri, OSKS; Sharma, Aditi; Awasthi, Shikha; Kachi, Anil; Kumar, Lalit;	Phys. Educ.	36		1-14	2019

Paper Presented in Conferences/Symposium (National/International)

	Title	Authors	Publication	Volume	Pages	Year
1	Phase Shift Analysis of α -12C Elastic Scattering Using Phase Function Method	Kumar, Lalit; Khachi, Anil; Sharma, Aman; Sastri, OSKS;	Proceedings of the DAE Symp. on Nucl. Phys	66	575	2022
2	P & D Inverse Potentials for Proton-Proton Scattering	Kumar, Lalit; Khachi, Anil; Sharma, Arushi; Sastri, OSKS;	Proceedings of the DAE Symp. on Nucl. Phys	66	579	2022

Conferences/colloquia/seminars/schools and workshops attended:

1	Online International Conference on Theoretical Aspects of Nuclear Physics 15 - 20 February, 2021 , Organized by Department of Physics and Astronomical Science, Central University of Himachal Pradesh.
2	Online Faculty Development Programme on Model Based Simulations in Classical Physics Using XCOS 15 - 21 November, 2021 Organized by Department of Physics and Astronomical Sciences Central University of Himachal Pradesh (CUHP) and Indian Association of Physics Teachers(IAPT)
3	Online International Conference on Recent Trends in Nuclear Physics 16 -18 February, 2022 , Organized by Department of Physics and Astronomical Science, Central University of Himachal Pradesh.
4	Participated in the “66 th DAE Symposium on Nuclear Physics”, and has made the Poster presentation for the contribution (B116) titled “Phase Shift Analysis of α -12 C Elastic Scattering Using Phase Function Method” December 1 - 5, 2022 Cotton University, Guwahati, Assam, India.
5	Participated in the “66 th DAE Symposium on Nuclear Physics”, and has made the Poster presentation for the contribution (B118) titled “P&D Inverse Potentials for Proton-Proton Scattering”. December 1 - 5, 2022 Cotton University, Guwahati, Assam, India.
6	Online International Conference on Recent Trends in Nuclear Physics 2 - 4 March, 2023 , Organized by Department of Physics and Astronomical Science, Central University of Himachal Pradesh and Indian Association of Physics Teachers (IAPT).

Awards

Recipient of the '**Best Oral Presentation Award**' at the Online International Conference on Recent Trends in Nuclear Physics, held from 16th to 18th February 2022.