



Prof. K.B. Joshi

K.B. Joshi hails from a remote countryside and the tribal belt of the southern Rajasthan. Being meritorious student throughout his schooling both the undergrad and M.Sc. were completed at the ML Sukhadia University, Udaipur. He topped the 1989 batch of The M.Sc. (Physics) in the University Department. To pursue higher studies he went to the Rajasthan University where he got M.Phil. and the Ph.D. During doctoral work he was groomed in both the experimental and computational condensed matter physics. Thereafter he started working on theoretical and computational physics niche wherein only a few Indian universities were working at that point of time. He is now actively involved in Computational Materials Science utilising the first-principles methods on a wide range of materials with emphasis on formation of materials under ambient and extreme conditions at various length scales. Using modelling and structure prediction capabilities the electronic, structural, thermoelectric and thermodynamic properties are modeled and studied. Besides this, he expanded code development capabilities to improve Empirical pseudopotential calculations to include the modified virtual crystal approximation and include charge density module in the study of ternary and quaternary mixed compounds.

At MLSU, very recently he and his Ph. D. students customised the second generation calculation package based on the Boltzmann transport equations to create an interface with the two first-principles calculation packages. Thus now it is also possible to launch a study on the thermoelectric properties of periodic solids using two more codes.

Four students got Ph.D. under his guidance and four are enrolled. Grants from the DST, CSIR, UGC, New Delhi and the RUSA-Phase I are successfully utilized for Research and Ph.D. Dr. Joshi visited the ICTP, Trieste (Italy), University of Rostock, Warnemunde (Germany), DESSY, Hamburg (Germany), Institute of Physics and Institute of Science, Hanoi (Vietnam). He holds membership of several organizations like IPA, Bangalore, SSI, New Delhi, ACCMS-VO, Japan and ACS, USA.

More than 75 papers are published in peer reviewed national, international journals and conference proceedings. Most of these have received wide readership mostly across USA, Europe, China and India. He is collaborating with a few Indian and foreign

universities. Several manuscripts from international publishing houses, academies and societies like Elsevier Science, Taylor & Francis, Chinese Academy of Science, National Natural Science Foundation of China, National Science Academy of India, American Chemical Society, American Institute of Physics, NISCAIR, India etc. have been reviewed.

Dr. Joshi was the first selected Professor of Physics at the Central University of Himachal Pradesh, Dharamshala. He served as Professor and Dean for about two years in the developing phase of the university. As a Chairman of the School Board he developed course curriculum of M.Sc. (Specialisation in Theoretical Physics) to implement Choice Based Credit System thereby setting trends in recent Indian pedagogy. He is and has been a member of Committee of courses, Curriculum development committee, Board of Studies, School boards and Academic council of some state and central Indian universities. He is also on the panel of experts in the Post Graduate Reserch Board of some universities. At CUHP he was a member of the Executive council. He has worked in several capacities like member inspection committee, project assessment committee, advisory committee of UGC schemes. As of now, Prof. Joshi has research and teaching(UG,PG) experiance of 21 years and overall six years of experience as Professor of Physics.

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