Faculty Profile

Name:　　　　　　Dr Sumita Datta

Designation　　　Associate Professor

Teaching areas　Quantum Mechanics, Statistical Physics, Numerical Methods,

Reserach areas　Computational Condensed Matter Physics, Quantum Many Body　Problems, Bose Einstein Condensation, Physics of Graphene and Solitons And Nonlinear Dynamics, Markov Chain Monte Carlo, Basic Stochastic Processes, Quantum Monte Carlo Simulations (Variational and   Diffusion)

Education

Ph D in Physics -The University of Texas at Arlington,USA, 1996
M. Sc in Physics- Indian Institute of Technology, Kharagpur, 1987
B.Sc(Honours in Physics)– Scottish Church College, Kolkata, 1983

Professional Experience 21years

1.July 2017 to till date as Associate Professor, ICFAI Foundation For Higher Education, Hyderabad,
2 Research Scientist, Indian Association for the Cultivation of Science 12-2010-06-2016
3 Reader, Department of Physics, Pondicherry University 09-2010-11-2010
4 Academic faculty of Physics, S N. Bose National Centre for Basic Sciences Kolkata, India 08-2002-08-2010
5 Research Associate, Indian Association for the Cultivation of Science 10-1997-07-2002
6 Visiting Scientist, Indian Space Research Organization, Bangalore, 06-1997-9-1997
7. Postdoctoral Fellow, The University of Texas at Arlington, USA, 01-1996-05-1997
8 Graduate Research Assistant, The University of Texas at Arlington, USA, 09-1992-12-1995
9 Graduate Teaching Assistant, The University of Texas at Arlington, USA, 09-1989-08-1992

Research /Selected Publications

Projects:

- The project entitled **'Quantum diffusion of the inter soliton distance in a Gross-Pitaevskii breather'** got approved for funding from the Department of Science and Technology, New Delhi on June 15,2017(**15 lakhs**) under SERB Extramural funding scheme(award # EMR/2016/005492)
- Active participant in Joint NSF-BSF Project on : **Nonlinear Dynamics with Gross-Pitaevskii Breathers** since July 2017

Publications:

1. S Datta, A path integral Monte Carlo study of Anderson Localization in cold gases in presence ofdisorder, Int J Comput Methods, 13(6) pp-1650032, 2016
2. SumitaDatta, S. A Alexander and R. L. Coldwell "The lowest order relativistic corrections of hydrogen molecule", Int J Q Chem ,112**,**pp**-**731-739, Feb 2012
3. S. A. Alexander, S Datta and R.L. Coldwell "Lowest Order Relativistic Corrections of Helium Computed Using Monte Carlo Methods" Phys Rev A. 81,pp 032519, 2010
4. S Datta and J. K. Bhattacharjee Calculations of Lyapunov exponent using an equivalent Stochastic system, J Phys A (Lett) 34, # 44, pp L603-L608 2001
5. S Datta, J L Fry N. G. Fazleev, S. A. Alexander & R. L. Coldwell Feynman-Kac path integral calculations with high quality trial wave functions, Phys. Rev A ,61 pp 030502 2000, (Rapid Communication)