

Dr. Pintu Bandyopadhyay, presently an Associate Professor at the Institute for Plasma Research (IPR) at Gandhinagar has made outstanding contributions in the field of experimental basic plasma physics, particularly in the area of complex (dusty) plasmas and has played a leading role in the establishment and development of such an experimental program at IPR. He completed his Honors in Physics in 1997 from University of Burdwan and Masters in Physics in 1999 from University of Kalyani and obtained his PhD in 2007 from IPR. After spending a year as a Post Doctoral Fellow at IPR, Dr. Bandyopadhyay moved to Max Planck Institute for Extraterrestrial Physics (MPE) at Garching, Germany in 2008. During his Post Doctoral tenure there, he was associated with the complex plasma group of MPE. His primary involvement was in the study of dynamics of plasma and dusty plasma in the presence of a homogeneous high magnetic field. He also participated in a number of parabolic flight campaigns conducted by German Aerospace Center to perform experiments in complex plasmas under micro-gravity conditions.

Since joining IPR in 2012, Dr. Bandyopadhyay has been actively engaged in both theoretical and experimental aspects of research in the areas of complex (dusty) plasmas, plasma diagnostics and plasma dynamics under high magnetic fields with a particular focus on nonlinear phenomena in strongly coupled regimes. To mention a few among his many notable contributions – he made the first ever-experimental observation of solitons and precursor solitons in dusty plasmas and also explored pattern formation in magnetized dusty plasmas. His papers on these findings have individually received more than a hundred citations. Apart from his research, Dr. Bandyopadhyay is also a very active research guide who is training a large number of young researchers at IPR. He is also significantly contributing towards the development of the national plasma physics program through his collaborative work with scientists in various colleges and Universities. He is a recipient of the Buti Young Scientist Award in 2006 for this pioneering work on “Experimental study of nonlinear solitary waves in a strongly coupled dusty plasma”.