

Award of the Bunge y Born 2010 Prize for Physics to Dr. Juan Pablo Paz

Juan Pablo Paz was born in Buenos Aires in 1959 and took his physics degree and doctorate at the University of Buenos Aires, which he was awarded in 1988. From 1989 to 1994 he carried out post-doctorate studies at the University of Maryland and at the Los Alamos laboratories in the United States. He returned to the Department of Physics of the Faculty of Exact and Natural Sciences of the University of Buenos Aires in 1994, where he remained until 2003, when he spent a year working with the theoretical division of Los Alamos National Laboratory, USA. He is currently the chair and director of the Physics Department and Chief Researcher at the CONICET. He has given lectures and courses as a guest speaker at some of the world's leading institutions such as Les Houches (France); Schladming (Austria); Banasque (Spain); Waterloo (Canada); Santa Fe Institute (USA); Massachusetts Institute of Technology (USA); Max Planck Institute, Dresden (Germany); Institute of Theoretical Physics, University of California, San Diego (USA); Collège de France, Paris, France; Institut Henri Poincaré, Paris, France; Harvard University, USA; Princeton University, USA; Isaac Newton Institute, Cambridge, UK; the Latin-American School of Physics (Mexico) and Buzios (Brazil). He has received numerous awards and prizes such as the Ernesto Galloni Prize 1994 from the Academy of Exact, Physical and Natural Sciences, International Fellowship of the Santa Fe Institute, USA (2001-2003), the Guggenheim Fellowship (2004) and the W. Bessel Award (2006) from the Alexander von Humboldt Foundation.

Professor Paz has published over 70 articles in renowned scientific journals which have been quoted some 3,400 times, showing an ample international following. His research is largely focused on the study of the frontiers between quantum and classical physics, in particular, the study of the loss of coherence of quantum states and the physics of information and quantum computation. In all these areas, which have sparked intense activity and interest at international level, Professor Paz has made significant contributions to knowledge. Although to-date his work has been in the area of theoretical physics, he has more recently extended his research to include experimental topics, using the manipulation and coherent detection of unique photons.

Another key aspect of his work has been the training of human resources and management activities. He has directed 13 degree theses and four doctoral theses. His work as Director of the Department of Physics of the Faculty of Exact and Natural Sciences of the University of Buenos Aires, an institution produces approximately half of the graduates and doctors in physics in this country, has been and continues to be excellent. His modernizing approach to management has transformed the center into a hive of activity, ready to receive young researchers returning to the country after their post-doctoral training abroad.

Given this background and bearing in mind;

- The significance of his research on decoherence, the classical-quantum transition and his analysis of possible applications to quantum computation;
- His contribution to human resources training;
- His management of the process to modernize the research and teaching activities at the University.

Dr Juan Pablo Paz is awarded the Prize for Scientific Research from the Bunge y Born Foundation for 2010 in the area of Physics.