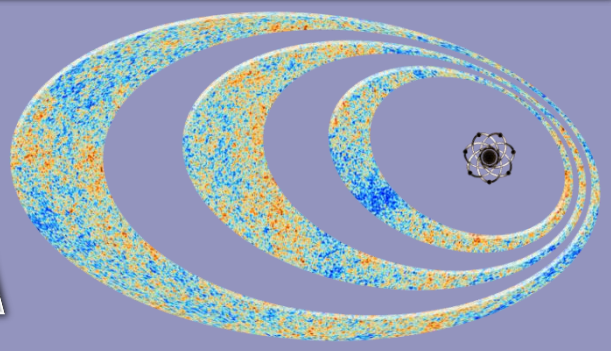
THE BRAHMAGUPTA PHYSICS COLLOQUIUM



Gravitation and the Cosmos 100 Years after Einstein's Discovery of General Relativity

Prof. Abhay Ashtekar, Pennsylvania State University

Abstract: 2015 marks the centennial of Einstein's discovery of general relativity, a theory that represents an unprecedented combination of mathematical elegance, conceptual depth and observational success. The talk will begin with a brief account of this discovery and the birth of modern cosmology, then discuss the concept of black holes and the major role they have come to play in astrophysics and fundamental physics, and finally explain the notion of gravitational waves. Through numerous historical anecdotes, the talk will illustrate a century of successive triumphs of general relativity and explain why researchers, who study general relativity in a serious manner, continue to be enchanted by its magic even a century after its discovery.

About the speaker: Abhay Ashtekar is the Director of the Institute for Gravitation and the Cosmos and holder of the Eberly Chair at Penn State. Before joining Penn State he was the Erasthus Franklin Holden Professor of Physics at Syracuse University and Professeur (Chaire de Gravitation) at Paris VI. He received his Ph.D. in physics from the University of Chicago in 1978. He was awarded Doctor Rerum Naturalium Honoris Causa by the Friedrich-Schiller Universit at, Jena, Germany in 2005 and by the Universite de Aix-Marseille II, France in 2010. He is a past President of the International Society for General Relativity and Gravitation. Ashtekar's research focuses classical general relativity and quantum gravity. He has given over 130 invited, plenary talks in various conferences and workshops world-wide. He is a Fellow of the American Association for Advancement of Science and the American Physical Society, and of only 51 Honorary Fellows of the Indian Academy of Sciences drawn from the International community. He won the Senior Forschungspreis of the Alexander von Humboldt Foundation. He has held the Krammers Visiting Chair in Theoretical Physics at the University of Utrecht, The Netherlands and the Sir C. V. Raman Chair of the Indian Academy of Science. He Chairs the International Advisory Committee of the Indigo Consortium in connection with the LIGO-India initiative.

Venue: Central Lecture Theatre

Date: October 7th, 2015

Time: 5:00-6:00 PM

Tea and cake at 4:45 PM

DEPARTMENT OF PHYSICS

INDIAN INSTITUTE OF TECHNOLOGY MADRAS