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Joining Forces: to Unify Nature and to Unite the World

The lecture will crisscross between two themes of unification of fundamental interactions and global collaboration for science with the following focus:

Unification of Forces: The remarkably simple and precise current understanding of all fundamental forces of nature from gravity to nuclear interactions. The powerful idea of joining all forces to describe diverse phenomena from electricity, magnetism, light, or radioactivity in a unified framework.

Science without Borders: The importance of fundamental science for development and the role of centers like the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste to make advanced science globally available and to promote international cooperation through science. The complementary visions of Homi Bhabha and Abdus Salam for building strong scientific communities in the developing world.

Vistas from a Science Frontier: The ongoing quest towards unification of quantum mechanics and general relativity within string theory with fascinating connections with duality, black holes, holography and quantum information.

Joining Forces for Global Action: The global challenges ahead from climate to computing where science-based, inclusive, collaborative approach will be increasingly important. ICTP's strategic priorities for an 'International Science Alliance' and an 'International Consortium for Scientific Computing' forging new collaborations in equal partnerships between ICTP, foundations, corporations, countries, national agencies and scientific institutions.

Institute Seminar

Presenter: DABHOLKAR, Atish (ICTP, Trieste)

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