

DISCRETE '08: Symposium on Prospects in the Physics of Discrete Symmetries



Thursday, 11 December 2008 - Tuesday, 16 December 2008

Valencia, Spain

Scientific Topics

The aim of the Symposium is to bring together experts on the field of Discrete Symmetries in order to discuss its prospects on the eve of the LHC era. The general state of the art for CP, T and CPT symmetries will be reviewed and their interplay with Baryogenesis, Early Cosmology, Quantum Gravity and the Dark Sector of the Universe will be emphasised. Connections with physics beyond the Standard Model, in particular Supersymmetry, will be investigated. Experimental implications in current and proposed facilities will receive particular attention.

The Quantum Vacuum

Entanglement, Symmetrisation Principle

CPT in Quantum Gravity and String Theory, Decoherence, Lorentz Violation

Ultra-high-energy Messengers

Cosmic Rays, Gamma Rays, Cosmic Neutrinos

Time Reversal

CP Violation: CKM and Beyond

Neutrino Mass, Mixing and CP

Baryogenesis

Leptogenesis

Family Symmetries

Supersymmetry

LHC Physics versus Dark Matter Studies

Experimental Prospects

LHC, Super-B, DAΦNE-2, Neutrino Beams