Area Seminar

Title	High Scale Mixing Unification for Dirac Neutrinos
Date and Time	23/12/2014 14:30:00
Speaker	Dr. Gauhar Abbas IFIC, Univ. of Valencia
Area	Theoretical Physics
Venue	Room No. 469
Abstract	Starting with high scale mixing unification hypothesis, we investigate the renormalization group evolution of mixing parameters and masses for Dirac type neutrinos. Following this hypothesis, the PMNS mixing angles and phase are taken to be identical to the CKM ones at a unifying high scale. Then, they are evolved to a low scale using renormalization-group equations. The renormalization group evolution "naturally" results in a non-zero and small value of leptonic mixing angle θ_{13}. One of the important predictions of this work is that the mixing angle θ_{23} is non-maximal and lies only in the second octant. We also derive constraints on the allowed parameter range for the SUSY breaking and unification scales, for which this hypothesis works. The results are novel and can be tested by present and future experiments.