PHYSICS SEMINAR

Date/Time: Friday 11 January 2:00 - 3:00 pm

Location: 3rd floor Physics conference room

Speaker: Professor Zoltan Bajnok (Wigner Institute, Budapest, Hungary)

Title: Integrable aspects of the AdS/CFT duality

Abstract: I will review the integrable aspects of the duality which relates IIB superstrings on AdS5 x S5 to the maximally supersymmetric 4D gauge theory. As the gauge theory is conformal, it can be completely characterized by its two- and three-point functions. The two-point functions are determined by the scaling dimensions, which correspond to the energies of string states. These scaling dimensions also fix the space-time dependence of the three-point functions up to a coupling-constant-dependent quantity called the three-point coupling, which is related to the annihilation and creation of string states (the string vertex). I will explain how integrability of the AdS/CFT correspondence can be used to calculate the scaling dimensions and the three-point couplings.