Nucleon Structure and Neutron Electric Dipole Moment

Tanmoy Bhattacharya Los Alamos National Laboratory and The Santa Fe Institute

Physics beyond the standard model involving heavy particles can be parameterized by effective field theories of new interactions between the standard model particles. The new interactions involving quarks and gluons are, however, dressed by the strong interactions before they can be observed as low energy properties of hadrons. Lattice QCD is currently the only systematically improvable approximation giving access to the hadronic structure describing this dressing. I will discuss the calculation of nucleon matrix elements like the tensor charge and the chromoelectric operator and their relevance to the electric dipole moment of the neutron.