



ISTITUTO NAZIONALE DI FISICA NUCLEARE
Gruppo Collegato di Parma (Sezione di Milano Bicocca)

Seminario Teorico

Seminario INFN

Il Dr. **Rajan Gupta**

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Los Alamos, NM - USA

terrà un seminario dal titolo

***Lattice QCD calculations of the
quark and gluon contributions to the proton spin***

The remarkable result, from the measurements of spin asymmetry in polarized deep inelastic scattering by the EMC collaboration, that the sum of the spins of the quarks contributes less than half of the total spin of the proton lay down the challenge to explain this "proton spin crisis" from QCD. I will show that calculations of the required matrix elements using Lattice QCD are now in a position to provide first principle results with all systematics under control and the steady reduction in the error budget. The most well determined of the contributions is of the quark's intrinsic spin. Existing lattice results will be reviewed and compared with current phenomenological/experimental estimates.

Lunedì 10 settembre
ore 14:30
Sala Feynman