Department of Theoretical Physics

Special Free Meson Seminar

Speaker	:	Takumi Doi (University of Tsukuba)
Topic	:	Nucleon strangness form factors from lattice QCD
Day, Date & Time	:	Friday, November 19, 2010 at 4:00 p.m.
Place	:	Theoretical Physics Seminar Room (A304)

Abstract

I will review the recent development of the lattice QCD calculation for strangeness electric and magnetic form factors in the nucleon. The strangeness calculation generally requires the evaluation of the so-called disconnected insertion (DI), which has been a long-standing issue in the lattice simulation. I discuss the methodology which significantly improves the signal for the DI calculation, and present the results from $N_f = 2 + 1$ full QCD lattice simulation. I also report the study of the lowest moments of the strangeness parton distribution function of the nucleon, $\langle x \rangle, \langle x^2 \rangle$.

(Nilmani Mathur)