

# CU Physics Department Colloquium

Monday, December 1, 2008 4:10 PM 428 Pupin Hall



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## FLAVOUR PHYSICS, LATTICES AND THE LHC

Precise studies of processes in which the flavour quantum number of the quarks changes are enabling us to explore the limits of the Standard Model of Particle Physics and will be central to unravelling the fundamental framework underpinning the signatures of new physics discovered at the LHC.

An important ingredient of this endeavour is the quantitative control of the effects of the strong nuclear force which requires large scale numerical simulations of (Lattice) Quantum Chromodynamics on powerful supercomputers.

I will review the history and prospects for flavour physics, including a description of the contribution of Makoto Kobayashi and Toshihide Maskawa who share the 2008 Nobel prize for physics with Yoichiro Nambu.

**Meet the Speaker will be held in 705 Pupin at 3:00 PM**