



Joint seminar of the John Adams Institute for Accelerator Science and Oxford Particle Physics

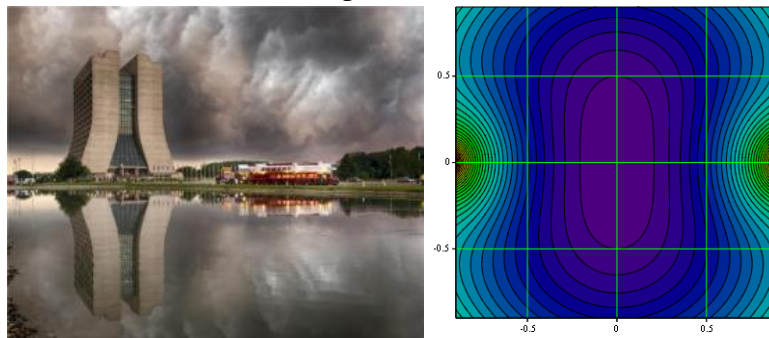
Thursday 2nd June 2016 at 2:30 pm
Dennis Sciama Lecture Theatre, Denys Wilkinson Building

Accelerator Science Program at the FAST/IOTA Complex at Fermilab

Professor Swapan Chattopadhyay
Distinguished Scientist and Director's Senior Leadership Team
Fermi National Accelerator Laboratory, USA
And
Presidential Chair of Research, Scholarship and Artistry
Professor and Director of Accelerator Research
Northern Illinois University, USA

Abstract:

I will present the current status of construction and scientific program of Fermilab Accelerator Science and Technology (FAST) test facility and its Integrable Optics Test Accelerator (IOTA) in particular. These facilities are envisaged to advance accelerator science of Coulomb-dominated high intensity hadron beams and the underlying nonlinear dynamics as well as advance innovative precision experiments to test novel techniques of beam phase-space manipulation and control using high quality low energy electron beams. These experiments will advance the future potential of the high power long baseline neutrino experiments using high intensity proton beams going beyond the currently envisioned PIP-II capabilities towards the long-baseline neutrino experiment DUNE (Deep Underground Neutrino Experiment). Simultaneously, the science program at FAST/IOTA will advance fundamental research and development in accelerator science.



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