INSTITUTE SEMINAR

9 October 2015 **12:00 hrs.** **Fermion**

Speaker:

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Title:

Nanobiophysics: using nanoscale structures to study molecular and cellular biophysics

Abstract:

Nanoscale structures, such as nanogap electrodes and nanofluidic confinement, given its simplicity in geometry in the forms of nanoslits, nanoconstrictions and nanochannels, nevertheless offers unique platforms for the study of molecular and cellular biophysics, with the potential for bioanalytical applications [1-3]. Examples will be given for entropy-driven single DNA tug-of-war (TOW) system [4, 5], molecular dam for biomolecule enrichment and sensing [6, 7], and electrode nanogaps for the manipulation and sensing of biomolecules [8]. Bacterial morphological plasticity can also be revealed by nanoscale confinement without genetic manipulations [9].

References:

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