大阪電気通信大学大学院
先端理工学専攻・電子通信工学専攻　合同ゼミナール

特別講義

特別講師
メリーランド大学

Theodore L. Einstein 教授

講演題目

"How General Ideas in Statistical Physics Helps One Understand Behavior of an Enormous Range of Systems"

日本語解説　山本真人　博士（大阪大学産業科学研究所）

日時　10月31日(火)　17:00〜18:30
場所　J号館6階　J610 教室

メリーランド大学のEinstein教授は固体物理、特に表面・界面の理論研究分野で卓越した業績をあげています。興味をお持ちの先生方や学部学生・他専攻の院生の聴講を歓迎いたします。なお，先端理工学専攻及び電子通信工学専攻の院生は必修ですので，必ず出席してください。

Abstract
While important for catalysis and growth of devices, steps on crystal surfaces also have fascinating theoretical properties based on the analogy between their two-dimensional configurations and the world lines (time evolution) of hard particles in one dimension. An adequate accounting of the distribution of the step separations (the crystal's terrace widths) can be obtained from a simple Schroedinger equation; a much better approximation is based on profound ideas about universal behavior of fluctuations. There is similar behavior in the early growth of islands on surfaces. Analogies of this nanoscale behavior are also seen in our daily lives, at over 10 orders of magnitude larger scale. Examples include times between buses in some Mexican cities, distributions of areas around subway stations, areas of districts (Japanese gun), and spacings between parked cars or birds on a wire.

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