



量子物理学・ナノサイエンス第 178 回セミナー/  
第 48 回数理解物理・物性基礎論セミナー

**講師** : **Professor Alexei Borodin**  
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**日程** : 4 月 11 日 (火) 15:00–18:00

**場所** : 西 5 号館 W531 レクチャーシアター

**1. The six vertex model and randomly growing interfaces in (1+1) dimensions (15:00-16:30)**

The goal of the talk is to explain how the six vertex model gives rise to models of (1+1)d random growth in the KPZ (Kardar-Parisi-Zhang) universality class, and how the Yang-Baxter integrability of the former leads to solvability of the latter.

**2. Integrable probability: between determinantal and nondeterminantal models (16:45-18:00)**

A recently discovered link between determinantal (free fermion) and nondeterminantal integrable stochastic models allows to reduce some asymptotic questions about the ASEP (asymmetric simple exclusion process) with step initial condition to those for TASEP (totally asymmetric simple exclusion process). More generally, a relation exists between the higher spin stochastic six vertex model and the Schur (and more generally, Macdonald) processes. The goal of the talk is to discuss this connection.

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