



量子物理学・ナノサイエンス第 80 回特別セミナー

Riemann surfaces for TASEP and KPZ fluctuations in finite volume

- 講師** : Professor Sylvain Prohac
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- 日程** : 10月6日(水) 17:00 – 18:30
- 場所** : Zoom*

概要

Current fluctuations for one-dimensional interacting particle systems with a Markovian evolution can be naturally formulated within the setting of Riemann surfaces. In the specific case of the totally asymmetric simple exclusion process (TASEP), an integrable model described at large scales by KPZ universality, we show that the Bethe ansatz solution of the model with periodic boundary conditions may be explicitly formulated in terms of meromorphic differentials on a compact Riemann surface. In the KPZ scaling limit, this Riemann surface converges to the infinite genus Riemann surface for polylogarithms with half-integer index, and connections to integrable non-linear partial differential equations appear.

*本 ZOOM セミナーに参加されます場合には、事前に下記より登録を済ませてください。

<https://us06web.zoom.us/meeting/register/tZl0fuihrDwqHfTLaN2SfNeG7grsyUvA9Wfi>

ご来聴を歓迎いたします。



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