Contribution Title:

Authors: Presenting author: Affilation: E-mail: Invited speaker: YRS seminar:

ASEP: INTEGRABLE STRUCTURES & LIMIT THEO-REMS C. A. Tracy, H. Widom Tracy C. A. UC Davis tracy@math.ucdavis.edu Topical session NO

We explain how ideas from Bethe Ansatz can be used to find exact formulas for the distribution of the current in the asymmetric simple exclusion process (ASEP). Asymptotic analysis of the resulting formulas then establishes KPZ universality for the current fluctuations. Extensions to ASEP with second class particles will also be discussed.