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Faculty of Physics



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# Seminar

Bielefeld - Melbourne Random Matrices

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### Muttalib-Borodin ensemble with general potential: integer $\theta$ case

The Muttalib-Borodin ensemble, with potential function  $V$ , is a log-gas model with two types of interaction, and its joint probability density function is proportional to

$$\prod_{1 \leq i < j \leq n} (x_i - x_j)(x_i^\theta - x_j^\theta) \prod_{i=1}^n x_i^\alpha e^{-nV(x_i)}.$$

When  $V(x) = x$ , interesting limiting distribution is found for the smallest particles. In this talk we discuss our recent result on the universality of the Muttalib-Borodin ensemble at the hard edge, when  $\theta$  is an integer, that is, the limiting distribution is not affected by  $V$ .

This is joint work with Lun Zhang.

**Wednesday, 17 March 2021, 0900 hrs CET**

Zoom Konferenzschaltung— Please contact Gernot Akemann  
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