



**UNIVERSITÄT
BIELEFELD**



Faculty of Physics



Faculty of Mathematics



THE UNIVERSITY OF
MELBOURNE

Seminar

Bielefeld - Melbourne Random Matrices

Christophe Charlier

KTH Stockholm

Asymptotics of Muttalib-Borodin determinants with Fisher-Hartwig singularities

Muttalib-Borodin determinants are generalizations of Hankel determinants and are relevant in the study of point processes known as Muttalib-Borodin ensembles. The notable feature of Muttalib-Borodin ensembles is that neighboring points $x_{\{j\}}, x_{\{k\}}$ repel each other as $\sim (x_{\{k\}} - x_{\{j\}})(x_{\{k\}}^{\theta} - x_{\{j\}}^{\theta})$, which differs, for $\theta \neq 1$, from the simpler and more standard situation $\sim (x_{\{k\}} - x_{\{j\}})^2$. In this talk I will discuss some recent results on asymptotics for Muttalib-Borodin determinants with Fisher-Hartwig singularities and I will present some applications.

Wednesday, 26 May 2021, 0900 hrs CEST

Zoom Konferenzschaltung— Please contact Gernot Akemann
(akemann@physik.uni-bielefeld.de) for details regarding access