



**UNIVERSITÄT  
BIELEFELD**



Faculty of Physics



Faculty of Mathematics



THE UNIVERSITY OF  
MELBOURNE

# Seminar

Bielefeld - Melbourne Random Matrices

## Renjie Feng

University of Bielefeld

### **Determinantal point processes on spheres: Multivariate linear statistics**

I will talk about the multivariate linear statistics (also called U-statistics) of the determinantal point processes on the unit spheres. I will first present a graphical representation for the cumulants of the multivariate linear statistics, then I will briefly explain how we get the first and 2nd Wiener chaos from this graphical representation and their correspondences. The method can be applied to any other determinantal point process.

This is based on the joint work with F. Goetze and D. Yao.

**Wednesday, 1<sup>st</sup> March 2023,  
0900 hrs CET**

Zoom Conference call— Please contact Lucas Hackl  
([lucas.hackl@unimelb.edu.au](mailto:lucas.hackl@unimelb.edu.au)) for details regarding access