

## CASUS Institute Seminar



### **Analytic continuation of Quantum Monte Carlo data**

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**Date:** Tuesday, 24 November 2020

**Time:** 14:00 – 15:00 CET

**Location:** CASUS Lecture Room, Görlitz

#### **Abstract:**

Path integral Monte Carlo methods constitute essential tools for the investigation of many-body systems beyond perturbation theory. However, while many static quantities can be computed directly, insight into dynamics is generally limited to an imaginary-time argument. In order to relate such results to experimental data, one needs to perform an analytic continuation back to real time, an ill-posed but well-studied problem.

This talk discusses two approaches, which are based on the maximum entropy method and stochastically sampling the trial-space of possible energy spectra. Finally, we will have a look at how this problem was recently dealt with for the case of the uniform electron gas by Dornheim et al.