



EINLADUNG zum IFP-SEMINAR

How functional averaging of spectra gives rise to Maximum-Rényi-Entropy principles

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Host: Karsten Held

Termin: Montag, 19. Februar 2024, 16:00 Uhr

Ort: TU Wien, Freihausgebäude

Wiedner Hauptstraße 8-10, 1040 Wien

Seminarraum DC rot 07 (roter Bereich, 7. OG)

Oder via ZOOM

<https://tuwien.zoom.us/j/63020566887?pwd=RmYvRmVwOGU5YVBrOHpodWRKaHFWQT09>

Vor dem Vortrag gibt es ab 15:30 Kaffee und Kekse

Abstract:

The analytic continuation of numerical correlation functions from the imaginary to the real axis is an ill-conditioned problem with many solutions of comparable quality. The MaxEnt method resolves that ambiguity by preferring solutions with large Shannon entropy relative to a default model. An alternative is to calculate the average over all solutions, weighted by their quality. This average spectrum method appears to require no a-priori information, but the choice of the functional measure actually does imply the introduction of a default model. We will discuss how the result of the functional average, in fact, becomes equivalent to a maximum-entropy method, where the entropy is, however, not limited to the conventional Shannon entropy but may be any of the family of Rényi entropies. The choice of the functional measure / entropy has profound consequences for the shape of peaks in the analytically continued spectra.

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