Implementation of the Sparse Modeling Method for Analytical Continuation

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Abstract

We present SpM, a tool for performing analytic continuation of spectral functions using the maximum entropy method. The code operates on discrete imaginary axis datasets (values with uncertainties) and transforms this input to the real axis. The code works for imaginary time and Matsubara frequency data and implements the 'Legendre' representation of finite temperature Green's functions. It implements a variety of kernels, default models, and grids for continuing bosonic, fermionic, anomalous, and other data. Our implementation is licensed under GPLv3 and extensively documented. This paper shows the use of the programs in detail.

Keywords: Sparse Modeling Method, Analytic Continuation

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1. Introduction

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