$F_\omega(\alpha+m)!$

Contribution ID: **11** Type: **not specified**

Introduction to interpolation, integration and spectral methods

Wednesday, October 30, 2019 2:00 PM (1 hour)

I overview key concepts and practical methods for efficient and accurate numerical function approximation, integration and differentiation. This is the basis for spectral and other ODE/PDE solvers coming up in the next talk. I will teach concepts such as convergence rate, local/global, adaptivity, rounding error, polynomial and Fourier bases. The focus is on 1D, with pointers to higher-dimensional methods and codes.

Lecture notes (see Lecture I) and codes for demo figures at:
https://github.com/ahbarnett/fwam-numpde

Presenter: BARNETT, Alex (CCM)

Session Classification: Function Approximation and Differential Equations Introductory Lecture