Meshless Finite Difference Methods

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Timetable: 16 hrs.

Scheduling of the Course:
Oct. 5, 6, 7, 8 from 10:30 to 12:00
Oct. 12 from 10:30 to 12:00
Oct. 14 from 10:30 to 12:00 and from 02:30 to 04:00 PM
Oct. 15 from 10:30 to 12:00

the Course will be held online. The link Zoom to the event will be communicated as soon as possible.

Course requirements: Undergraduate Linear Algebra, Calculus and Numerical Analysis.

Examination and grading: a small project or an oral exam.

SSD: MAT/08 - MAT/05


Course contents:

1. Introduction into positive definite functions and reproducing kernel Hilbert spaces. (2h)
2. Numerical differentiation with polynomials and kernels I-II. (4h)
3. Meshless finite difference methods: Introduction and error bounds I-II. (4h)
4. Meshless finite difference methods: Computational aspects I-III. (6h)