UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

DOTTORATO DI RICERCA / PHD PROGRAM IN
INFORMATION TECHNOLOGY AND ELECTRICAL ENGINEERING

Ad hoc course announcement

Title: **Numerical treatment of PDEs**

Lecturer: **Prof. Francesco Calabrò**

Dipartimento di Matematica e Applicazioni "Renato Caccioppoli" Università degli Studi di Napoli Federico II
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Credits: 6

Overview

The course is borrowed from the PhD Programs of the "Scuola Superiore Meridionale"
Lectures are *online* on the University platform Microsoft Teams.
Team Code: **a2di18o**
There will be a final assessment for ITEE students.

Schedule

Lecture	Date	Time	Topics
1	11/01	9-11	Introduction
2	13/01	9-11	RK methods for ODEs
3	18/01	9-11	Finite Differences
4	20/01	9-11	FD for time-dependent problems
5	25/01	9-11	SD in time vs SD in space
6	27/01	9-11	Weak solution of PDEs
7	01/02	9-11	The use of FreeFem++
8	03/02	9-11	Galerkin methods
9	08/02	9-11	Finite Elements for Elliptic problems
10	10/02	9-11	FE for time-dependent problems
11	15/02	9-11	Implementation Issues
12	17/02	9-11	Advanced topics
	TBA		Assessment test

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