



# Colloquio di Matematica del Dini

31 marzo 2022, ore 14:30, aula 203

Dipartimento di Matematica e Informatica "Ulisse Dini"  
Università di Firenze

## ALFIO QUARTERONI

Politecnico di Milano (Italy)

Ecole Polytechnique Fédérale de Lausanne (Switzerland)

## Physics-based and data-driven mathematical models for the simulation of the heart function

*This seminar focuses on machine learning (the computers' ability to learn based on training from large data sets) and computational science (the use of mathematical models originated from fundamental principles of physics) in solving mathematical problems of interest in real life. Similarities and differences, potentials and limitations are discussed, as well as the enormous possibilities offered by their synergistic use. The driving application will be the simulation of the cardiac function, in both physiological and pathological regimes.*



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MATEMATICA E INFORMATICA  
"ULISSE DINI"