

February 26, 2024 – 3:30pm-5:30pm
February 27, 2024 – 4:00pm-6:00pm
February 29, 2024 – 3:30pm-5:30pm

Prof. Antonio Di Carlo

Professor (retired) Theoretical Condensed-Matter Physics

Combining Molecular Mechanics and Continuum Thermo- Mechanics

In this short course, I will introduce and discuss the fundamentals of molecular mechanics and of continuum (thermo-)mechanics, presenting them in a common framework. After bringing to the fore the complementary strengths and weaknesses of continuum field theories on one side and molecular dynamics on the other side, I will present the basics of a new conceptual and computational framework in which the macroscopic and the microscopic components, while evolving in parallel, are coupled cell-wise on an intermediate, mesoscopic length-time scale, thus enhancing their complementary strengths and mitigating their respective weaknesses.

Program:

https://phd.uniroma1.it/web/course---combining-molecular-mechanics-and-continuum-thermo-mechanics_nS5809EN_EN.aspx

Registration form:

<https://forms.gle/txat28suLpaxndBB8>