

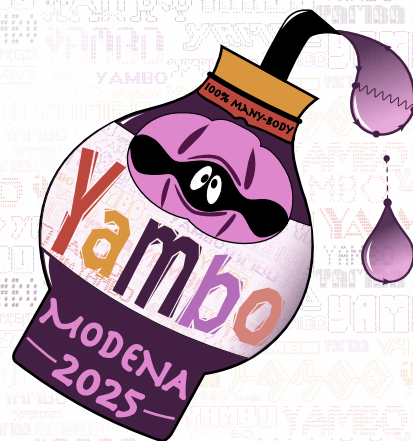
Many-Body Perturbation Theory and Excited-State Simulations



19-23 May 2025



University of Modena and Reggio Emilia
Via Campi 213/B, Modena



This school is designed for researchers interested in advanced computational methods for studying light-matter interactions, crucial for optoelectronic devices, quantum computing, and energy applications.

Participants will receive introductory and advanced lectures on many-body perturbation theory, covering topics such as the GW approximation, Bethe-Salpeter equation, non-linear optics, and recent algorithmic advances for 2D systems and metals.

Hands-on sessions will focus on practical simulations using the **YAMBO** code within a high-performance computing environment, including GPU-accelerated machines. Additionally, participants will learn Python-based post-processing and data analysis with YamboPy.

YAMBO is a flagship code of the MaX Centre of Excellence, ICSC PNRR Italian National Centre for HPC, Big Data and Quantum Computing and the Hanami project.

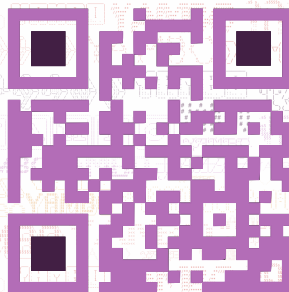
Lecturers:

F. AFFINITO, CINECA
E. CANNUCCIA, Aix-Marseille Université
C. CARDOSO, CNR-NANO Modena
A. FERRETTI, CNR-NANO Modena
C. FRANCHINI, Università di Bologna
M. GOVONI, Università di Modena and Reggio Emilia
A. GUANDALINI, Università di Roma La Sapienza
M. GRÜNING, Queen's University Belfast
E. LUPPI, Sorbonne Université Paris
A. MARINI, CNR-ISM, Roma
F. MOHAMED, École Polytechnique Paris
F. PALEARI, CNR-NANO, Modena
M. PALUMMO, Università di Roma Tor Vergata
D. SANGALLI, CNR-ISM Roma
G. SESTI, CNR-NANO Modena
D. VARSANO, CNR-NANO Modena

Organizers:

D. VARSANO (CNR-NANO, Modena), M. PALUMMO (Università di Roma Tor Vergata), F. PALEARI (CNR-NANO, Modena), M. D'ALESSIO (University of Modena and Reggio Emilia), M. BARTOLACELLI (CNR-NANO, Modena), S. CAVICCHIOLI (CNR-NANO, Modena), N. SPALLANZANI (CNR-NANO, Modena)

Contact: yambo@yambo-code.eu



Apply at the link
on the webpage

Deadline:
March 31, 2025

<https://www.yambo-code.eu/2025/01/17/yambo-school-modena-2025/>

