PHYS-820

Summer school: Simulating Many-Body Quantum Physics

Carleo Giuseppe

Cursus	Sem.	Type
Physics		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Oral
Workload	60h
Hours	**54**
Courses	19
Exercises	8
TP	27
Number of positions	

Frequency

Only this year

Remark

June 2-6, 2025. Registration via https://sim-mbqp25.epfl.ch/

Summary

The course covers classical\quantum methods for simulating quantum many-body systems, including Quantum Monte Carlo (Variational Monte Carlo) neural-and tensor network wavefunctions, quantum algorithms, and error mitigation. Participants enhance practical skills and interdisciplinary collaboration.

Content

Note

EPFL PhD students (organizers):

- Imelda Romero (imelda.romero@epfl.ch)
- Gian Gentinetta (gian.gentinetta@epfl.ch)
- Gabriel Pescia (gabriel.pescia@epf.ch)
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Keywords

QMC, VMC, QML, NQS, Tensor Networks, ML

Resources

Moodle Link

- https://go.epfl.ch/PHYS-820