

Next training Oct.24th–28th @Univ.Strasbourg/on-line

Quantum Computing for Chemistry – The Next Revolution

Leverage the transformative potential of quantum computing and its applications to chemistry, innovative materials and beyond.

REGISTER NOW!
Attend online / in-person

Université de Strasbourg | QunaSys | QPARC | Fondation pour la Recherche en Chimie | aQcess | C-CONNECTUS | QUANTUM FLAGSHIP

Monday 24 Oct | Tuesday 25 Oct | Wednesday 26 Oct | Thursday 27 Oct | Friday 28 Oct

<https://q4chem.strasbourg2022.eu/>

Who should attend

- Anyone looking for an overview of quantum computing and applications
- Computational chemists, theoretical physicists and STEM
- Developers who want to learn to code quantum algorithms

Training content: modular and multi-audience

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Quantum Computing Foundations	Overview of (Quantum) Chemistry	Use-Cases “Getting Ready” Workshop	Short Term Algorithm Tests	Use Case examples Simulations
- Introduction to Quantum Computing	- Quantum Chemistry on Quantum Computers	- Use Case Brainstorming	- Programming Tutorials Using Qulacs and Other Libraries	- Advanced VQE – Excited State Calculations
- Working in an Ecosystem Model (QPARC)	- Limitations (DFT, Hartree-Fock, Many-Body Schrodinger Equation)	- Analyzing and Prioritizing Use Cases	- Guidance and Mock Development; Testing Qamuy Examples	- Advanced VQE – Molecular Properties
- State of the Art: Technology Trends, Use Case Examples	- Quantum Skills Review: Algebra and Chemistry	- Maximizing Quantum Opportunities	- VQE Review: Ansatz Design, Ground States	- Advanced VQE – Molecular Dynamics Using Qamuy
- Working in Quantum Computing	- Quantum information foundations: concepts & algorithms	- Approaching Use Case Development	- Long-Term Quantum Algorithms	- Advanced VQE – Periodic Systems Using Qamuy

End-to-end training

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Generalist module

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Developer module