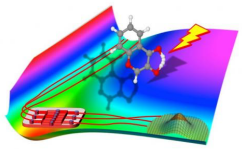

MLQC4Dyn - Week 3

September 19

09:30 - 10:00	**Onsite registration - coffee**
10:00 - 10:10	**Welcome from the organizers**
	Chair: Bruno Senjean
10:10 - 11:00	**Michael Marthaler** - HQS Quantum Simulations
	Simulating open quantum systems with quantum computers
11:00 - 11:50	**Ada Warren** - Virginia Tech
	ADAPTive Variational Quantum Algorithms for Gibbs State Preparation
12:00 - 14:00	**Lunch break**
	Chair: Florian Eich
14:00 - 14:50	**David Munoz Ramo** - Quantinuum
	Using molecular symmetries to perform quantum simulations on current quantum hardware
14:50 - 15:10	**Coffee break**
15:10 - 16:00	**Victor Alessandrini** - Maison de la Simulation
	Quantum Computing Emulation
16:00 - 18:00	**Group discussions / Round tables**

September 20

	Chair: Francesco Tacchino
09:50 - 10:40	**Matthias Degroote** - Boehringer Ingelheim B.V.
	Efficient quantum computation of molecular forces and other energy gradients
10:40 - 11:00	**Coffee break**

11:00 - 11:50	**Benjamin Lasorne** - CNRS Montepellier *Quantum dynamics on quantum computers: where do we stand, where may we go?*
12:00 - 14:00	**Lunch break** **Chair: Dario Rocca**
14:00 - 14:50	**Ivan Rungger -** National Physical Laboratory *Green's functions algorithms on quantum computers for materials science*
14:50 - 15:10	**Coffee break**
15:10 - 16:00	**Giulia Galli** (R) - The University of Chicago and Argonne National Laboratory *Quantum embedding methods for simulations of materials on quantum computers*
16:00 - 18:00	**Group discussions / Round tables**
19:30 - 21:30	**Social dinner**

September 21

	Chair: Thomas Ayral
09:00 - 09:50	**Ivano Tavernelli -** IBM Research Zurich *TBA*
09:50 - 10:40	**Francesco Tacchino -** IBM Research Zurich *Quantum algorithms for dynamics: from quantum simulations to quantum machine learning*
10:40 - 11:00	**Coffee break**
11:00 - 11:50	**Rick van Bijnen -** Innsbruck University / IQOQI *Variational Quantum Optimization Algorithms*
12:00 - 14:00	**Lunch break** **Chair: Martin Beseda**
14:00 - 14:50	**Artur Izmaylov -** University of Toronto *Algebraic techniques for dealing with difficult operators in quantum chemistry on a quantum computer*
14:50 - 15:10	**Coffee break**

15:10 - 16:00	**Saad Yalouz** - CNRS and Université de Strasbourg *Quantum computing to describe properties of correlated many-body systems: from quantum chemistry to condensed matter physics*
16:00 - 16:50	**Roman Krems** (R) - University of British Columbia *Optimal quantum kernels for classification and regression problems*

September 22

	Chair: Matthieu Saubanère
09:50 - 10:40	**Francesco Evangelista** - Emory University *Projective quantum algorithms for quantum chemistry*
10:40 - 11:00	**Coffee break**
11:00 - 11:50	**Bruno Senjean** - CNRS Montpellier *Towards Density Functional Theory on Quantum Computers*
12:00 - 14:00	**Lunch break**
	Chair: Saad Yalouz
14:00 - 14:50	**Martin Beseda** - CNRS Montpellier *Quantum dynamics with state-averaged VQE in noisy environment*
14:50 - 15:40	**Matthieu Saubanère** - CNRS Montpellier *Alternatives to unitary coupled cluster Ansatz for variational quantum Eigensolver*
16:00 - 19:00	**Happy hour**

September 23

	Chair: Ivan Rungger

09:00 – 09:50	**Giuseppe Carleo -** EPFL
	Variational learning in the age of machine learning and quantum computing
09:50 - 10:10	**Coffee break**
10:10 - 11:00	**Thomas Ayral -** Atos Quantum Lab
	Quantifying quantum advantage through high-performance classical simulations: two examples
11:00 – 11:50	**Adam Smith** (R) **-** The University of Nottingham
	Topology on quantum computers
12:00 - 14:00	**Lunch**

(R) denotes remote speakers