

Nordic Quantum Autumn School 2025 (draft timetable)		
Date: Nov 3-7, 2025	location: RISE KTH at "Innoversum" room	organisers: ENCCS, NCC Denmark, NCC Lithuania

	Monday 3rd	Tuesday 4th	Wednesday 5th	Thursday 6th	Friday 7th
slot 1	<div>9:00–10:00</div> <div>arrival and coffee 9:00–9:30</div> <div> <div>9:00–10:00</div> <div> Welcome & Introduction to QAS2025 Thor Wikfeldt (ENCCS/RISE, SE) </div> </div>	<div>Introduction to variational quantum algorithms: QAOA</div> <div>Franz Fuchs (SINTEF, UiO, NO)</div>	<div>Introduction to variational quantum algorithms: VQE and beyond (QPE, ..., SQD)</div> <div>Juan de Gracia Triviño (ENCCS/RISE, SE)</div>	<div>introduction toTrapped-ion</div> <div>Panagiotis Barkoutsos (IonQ)</div>	<div>Quantum Neural Networks</div> <div>Stefano Markidis (KTH, SE)</div>
slot 2	<div>10:00–11:00</div> <div> Introduction to the European Hybrid classical/quantum HPC+AI+QC ecosystem. LUMI-Q Quantum Flagship </div> <div>Mikael Johansson (CSC, FI)</div>	<div> <div>10:00–10:40</div> <div> In-depth description of variational quantum algorithms: QAOA </div> <div>Franz Fuchs (SINTEF, NO)</div> </div> <div> <div>coffee break 10:40–11:00</div> </div>	<div> <div>10:00–10:40</div> <div> VQE applied to use cases for quantum chemistry/drug discovery: in-depth description of specific use case </div> <div>Panagiotis Barkoutsos (IonQ)</div> </div> <div> <div>coffee break 10:40–11:00</div> </div>	<div> <div>10:20–11:00</div> <div> coffee break 10:00–10:20 </div> <div> Atomistic simulations on quantum accelerated supercomputing </div> <div>Karim (ENCCS/RISE, SE)</div> </div>	<div> <div>10:00–10:40</div> <div> hands-on QNNs using pennylane/classification (tutorial) </div> <div>Stefano Markidis (KTH, SE))</div> </div> <div> <div>coffee break 10:40–11:00</div> </div>
slot 3	<div>11:00–12:00</div> <div> Overview of the HPC/QC software stack, from ready-made Q-libraries for common tasks to circuit level assembly and hardware-level coding </div> <div>Miroslav Dobsicek</div>	<div>to be defined</div> <div>Speaker</div>	<div>Controlling a quantum computer using pulses</div> <div>Stefan Seegerer (IQM)</div>	<div>Accelerated Quantum Supercomputing using NVIDIA CUDA-Q</div> <div>Esperanza Cuenca-Gómez (NVIDIA)</div>	<div>Quantum Reservoir computing</div> <div>Ruben Pariente Bassa (SINTEF, NO)</div>
	<div>12:00–13:00</div> <div>Lunch</div>	<div>Lunch</div>	<div>Lunch</div>	<div>Lunch</div>	<div>Lunch</div>
slot 4	<div>13:00–14:00</div> <div> Quantum gates and circuits </div> <div>Giulia Ferrini (MC2, Chalmers/WACQT, SE)</div>	<div> Getting started with algorithm development on actual quantum hardware using IQM Resonance </div> <div>Stefan Seegerer (IQM)</div>	<div>High Ground State Overlap via Quantum Embedding Methods</div> <div>Matthias Christandl (København U, DK)</div>	<div>Quantum error-correction (QEC)</div> <div>Mats Granath (Göteborg University)</div>	<div> Towards 2045: Do we still talk about Quantum superiority? </div> <div>Panel discussion</div>
slot 5	<div>14:00–15:00</div> <div> Quantum gates, circuits and algorithms </div> <div>Juan de Gracia Triviño (ENCCS/RISE, SE)</div>	<div> Developing quantum algorithms with qrisp, the next generation of quantum algorithm development </div> <div>Stefan Seegerer (IQM)</div>	<div> interactive tutorial on the devices (LUMI-Q/IQM devices) </div> <div>speaker (VLQ)</div>	<div>quantum monte carlo and quantum finance</div> <div>Björn Löfdahl (SEB)</div>	<div>closing</div> <div>The end</div>
	<div>15:00–15:30</div> <div>coffee break</div>	<div>coffee break</div>	<div>coffee break</div>	<div>coffee break</div>	
slot 6	<div>15:30–16:30</div> <div> Quantum Information Theory introduction, building quantum algorithm, QFT, ... </div> <div>Stefano Markidis (KTH, SE)</div>	<div> <div>interactive tutorial: experiments with quantum gates, circuits and algorithms (qiskit/qrips simulation)</div> <div>Juan de Gracia Triviño (ENCCS/RISE, SE)</div> </div>	<div>PechaKucha presentations and posters</div>	<div> <div>interactive tutorial: Quantum error-correction (QEC) hands-on</div> <div>Mats Granath team (Göteborg University)</div> </div>	
slot 7	<div>16:30–17:30</div> <div> SuperQEUROK and LUMI-Q - facts and opportunities </div> <div>Göran Wendin (RISE, SE)</div>	<div> <div>interactive tutorial: Execution of simple examples on optimisation with QAOA (simulation)</div> <div>hands-on (Franz)</div> </div>		<div> <div>interactive tutorial: quantum monte carlo and quantum finance</div> <div>Björn Löfdahl (SEB)</div> </div>	
	<div>18:00–20:00</div> <div>Reception, mingling</div>		<div>Buffé dinner</div>		