

PROGRAM

macQsimal 

# Quantum sensing with hot vapors

## Symposium

- Date 21 June 2022
- Start time 10:30 CEST
- End time 17:00 CEST
- Online event - please register at:



Symposium website:

<https://www.macqsimal.eu/final-symposium>

**unine**  
Université de Neuchâtel

**csem**

**A!**  
Aalto University

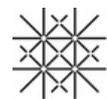
 Durham University

 **BOSCH**

**ICFO**<sup>R</sup>

 Universität Stuttgart

**MEGIN**

 Universität Basel

 Niels Bohr Institutet

**VTT**

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takes you further

Time	Presentation	Speaker
10:30-12:00	<b>Session 1 macQsimal project</b> <ul style="list-style-type: none"> <li>The macQsimal project within the Quantum Flagship: general overview and next steps</li> <li>Atomic vapor cells for Quantum sensors: an overview of the fabrication techniques</li> </ul>	Dr. Jacques Haesler (CSEM)  Dr. Thomas Overstolz (CSEM)/Dr. Christoph Affolderbach (UNINE)/Dr. Robert Löw (STUTT)
12:00-13:00	<b>Lunch break</b>	
13:00-13:45	<b>Session 2 Atomic clocks</b> <ul style="list-style-type: none"> <li>Progress on a micro-fabricated atomic clock for industry</li> <li>Enhanced microcell atomic clock based on pulsed double-resonance Ramsey interrogation</li> </ul>	Dr. Jacques Haesler (CSEM)/Dr. Christian Schori (Oroliia)  Dr. Christoph Affolderbach (UNINE)
13:45-14:30	<b>Session 3 Atomic gyroscopes</b> <ul style="list-style-type: none"> <li>Atomic gyroscopes for precise positioning</li> <li>Ceramic packaging for photonics (LTCC)</li> </ul>	Dr. Janine Riedrich-Möller (BOSCH)  Dr. Markku Lahti (VTT)
14:30-15:15	<b>Session 4 Optically-pumped magnetometers</b> <ul style="list-style-type: none"> <li>Optically-pumped magnetometer using miniaturized, mass-producible components</li> <li>Quantum enhanced conductivity measurement with room-temperature RF magnetometer</li> <li>Optical Magnetic Gradiometers based on multipass vapor cells</li> </ul>	Dr. Kostas Mouloudakis (ICFO)  Rebecca Schmieg (UCPH-NBI)  Dr. Vito Giovanni Lucivero (ICFO)
15:15-15:30	<b>Coffee break</b>	
15:30-16:15	<b>Session 5 – Atomic THz/GHz sensor and imager</b> <ul style="list-style-type: none"> <li>Towards optical quantum control of Helium-3 nuclear spins</li> <li>Storing single photons in hot vapor cell quantum memories</li> </ul>	Dr. Matteo Fadel (UNIBAS)  Dr. Gianni Buser (UNIBAS)
16:15-17:00	<b>Session 6 – Rydberg-based gas sensors</b> <ul style="list-style-type: none"> <li>Molecules, the better atoms?</li> <li>Towards an optogalvanic flux sensor for nitric oxide based on Rydberg excitations</li> <li>Doppler-free spectroscopy on the <math>A \ ^2\Sigma^+ \leftarrow X \ ^2\Pi_{3/2}</math> transition in nitric oxide</li> </ul>	Dr. Robert Löw (STUTT)  Fabian Munkes (STUTT)  Patrick Kaspar (STUTT)
17:00	<b>End of the symposium</b>	

