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

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Time	Presentation	Speaker
10:30-12:00	**Session 1 macQsimal project**	
	• The macQsimal project within the Quantum Flagship: general overview and next steps	Dr. Jacques Haesler (CSEM)
	• Atomic vapor cells for Quantum sensors: an overview of the fabrication techniques	Dr. Thomas Overstolz (CSEM)/Dr. Christoph Affolderbach (UNINE)/ Dr. Robert Löw (STUTT)
12:00-13:00	**Lunch break**	
13:00-13:45	**Session 2 Atomic clocks**	
	• Progress on a micro-fabricated atomic clock for industry	Dr. Jacques Haesler (CSEM)/ Dr. Christian Schori (Orolia)
	• Enhanced microcell atomic clock based on pulsed double-resonance Ramsey interrogation	Dr. Christoph Affolderbach (UNINE)
13:45-14:30	**Session 3 Atomic gyroscopes**	
	• Atomic gyroscopes for precise positioning	Dr. Janine Riedrich-Möller (BOSCH)
	• Ceramic packaging for photonics (LTCC)	Dr. Markku Lahti (VTT)
14:30-15:15	**Session 4 Optically-pumped magnetometers**	
	• Optically-pumped magnetometer using miniaturized, mass-producible components	Dr. Kostas Mouloudakis (ICFO)
	• Quantum enhanced conductivity measurement with room-temperature RF magnetometer	Rebecca Schmieg (UCPH-NBI)
	• Optical Magnetic Gradiometers based on multipass vapor cells	Dr. Vito Giovanni Lucivero (ICFO)
15:15–15:30	**Coffee break**	
15:30–16:15	**Session 5 – Atomic THz/GHz sensor and imager**	
	• Towards optical quantum control of Helium-3 nuclear spins	Dr. Matteo Fadel (UNIBAS)
	• Storing single photons in hot vapor cell quantum memories	Dr. Gianni Buser (UNIBAS)
16:15–17:00	**Session 6 – Rydberg-based gas sensors**	
	• Molecules, the better atoms?	Dr. Robert Löw (STUTT)
	• Towards an optogalvanic flux sensor for nitric oxide based on Rydberg excitations	Fabian Munkes (STUTT)
	• Doppler-free spectroscopy on the A $^2\Sigma+ \leftarrow$ X $^2\Pi3/2$ transition in nitric oxide	Patrick Kaspar (STUTT)
17:00	**End of the symposium**	

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