

VCSEL Day 2026 Program

Talk schedule and poster-session list

Program

Registration 09:00–09:30

Welcome 09:30–09:40

Session 1: Polarization and Spin-VCSEL Dynamics 09:40–10:40

Slot	Speaker	Contribution
09:40–10:00	V. Torrelli Politecnico di Torino	Impact of anisotropies and magnetic fields on VCSELs' polarization
10:00–10:20	M. Drong Center for Optoelectronics and Photonics Paderborn (CeOPP), Paderborn University	Control of spin-VCSEL dynamics via non-Hermitian singularities
10:20–10:40	A. Gasbarri Politecnico di Torino	FWM and Polarization Instabilities in the RIN of Multi-Mode VCSELs: Full vs. Partial Polarization Control

Poster Session and Coffee Break 10:40–11:40

Session 2: Spin Injection, Ultrafast Dynamics, and Computing 11:40–12:40

Slot	Speaker	Contribution
11:40–12:00	M. Lindemann Ruhr University Bochum	Spin injection and ultrafast dynamics in VCSELs
12:00–12:20	N. Heermeier Ruhr University Bochum	Towards electrical spin injection for VCSELs
12:20–12:40	K. Luedge Technische Universität Ilmenau	Spin-VCSEL for physical reservoir computing

Lunch Break 12:40–14:10

Session 3: Quantum Applications and Sensing 14:10–15:10

Slot	Speaker	Contribution
14:10–14:30	N. Jung TÜV Informationstechnik GmbH	Evaluation and Certification of QKD Systems: Opportunities and Challenges for VCSEL Applications
14:30–14:50	A. Gullino CNR-IEIIT, Torino	Optimized design of 795 nm Multi-Junction Vertical-Cavity Surface-Emitting Lasers for Quantum Sensing Applications
14:50–15:10	M. Marciniak Institute of Physics, Lodz University of Technology	Tailoring Multimode VCSELs for Emerging Photonic Applications through Noncircular Apertures

Poster Session and Coffee Break 15:10–16:10

Session 4: Epitaxy, Power Scaling, and Emerging Devices 16:10–17:10

Slot	Speaker	Contribution
16:10–16:30	P. Debernardi CNR-IEIIT, Torino	Towards 100 mW axial single-mode, single-polarisation VCSELs
16:30–16:50	G. Almuneau LAAS-CNRS Toulouse	VCSEL epitaxially-grown on germanium and silicon platforms
16:50–17:10	M. Miller Vertical Photonics	Red VCSEL with Integrated Photodiode

Lab Tours 17:10–17:50

Conference Dinner (Meeting point: Registration desk) 18:00

Poster Session List

Poster	Presenter	Contribution
P01	M. G. C. Alasio Politecnico di Torino	Po.Li.Te: a VCSEL-native design tool for frontier VCSEL architectures
P02	K. Dahler Institut für Halbleiteroptik und Funktionelle Grenzflächen	Monolithic 850 nm VCSEL arrays for Quantum Key Distribution via the Decoy State Protocol
P03	M. D'Alessandro Politecnico di Torino	Impact of coherent coupling on transverse modes dynamics
P04	T. de Adelsburg Ettmayer Ruhr University Bochum	Self Injection Locking in Laterally Coupled Cavity VCSELs
P05	U. Diiankova Ruhr University Bochum	Experimental study of polarization dynamics in a 794 nm spin-VCSEL
P06	Y. Hu Ruhr University Bochum	Coupled-Cavity VCSEL as a Single-Device Optical Source for Continuous-Wave THz Generation
P07	K. Olucha Lukasiewicz-IMiF	Key Aspects of Ge-Based Array Fabrication
P08	S. Tamborrino Politecnico di Torino	Reconstruction of an effective 2D VCSEL from near-field measurements for predictive VCSEL-MMF coupling modelling

