

# Photonics Integration and Packaging

Neuchatel, March 21, 2024

Christian Bosshard, Managing Director Swissphotonics



# SWISS PHOTONICS : Mission



Events & News

Swiss

Funding

Photonics21

Support

Jobs

About

## Swissphotronics Events

- Tue, 19.03.2024 **Lunch Chat: Nanotechnology and tooling for industrial applications, online**
- Thu, 21.03.2024 **Photonics Integration and Park Visitation, Neuchâtel**
- Tue, 26.03.2024 **Lunch Chat: The Photonics Industry by Luxtelligence save time and money, online**
- Fri, 19.04.2024 **Lunch Chat: Photonics21, online**
- Tue, 23.04.2024 **Lunch Chat: Photonics21, online**
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- Tue, 07.05.2024 **Lunch Chat: The Swiss Quantum Commission, online**
- Tue, 14.05.2024 **Lunch chat: Presentation by Eulitha, online**
- Tue, 28.05.2024 **Lunch Chat: Standardized TFLN PIC platform: much more than telecom, online**

## Partner Events Calls

- Mon, 1.01. – Tue, 31.12.2024 **Photonics21 Events 2024, Europe and beyond**
- Fri, 01.03. – Thu, 11.03.2024 **Innovation Booster Photonics Events 2024**
- Mon, 11.03. – Wed, 20.03.2024 **Global Quantum Symposium 2024**
- Mon, 15.04.2024 **Photonics in Space Workshop, HUBER+SUHNER, Herisau**
- Tue, 16.04.2024 **OCLA 2024, Campus OST, Buchs**
- Tue, 23.04. – Wed, 24.04.2024 **Laserschutzkurs, UZH**
- Tue, 14.05. – Wed, 15.05.2024 **Photonics Partnership Annual Meeting 2024**
- Tue, 04.06. – Thu, 06.06.2024 **SLT 2024, Stuttgart**
- Mon, 02.09. – Wed, 04.09.2024 **SimOEP 2024**
- Sun, 15.09. – Thu, 19.09.2024 **LANE 2024, Fürth**

**Mission: Improve competitiveness of our members by strengthening the innovation forces to secure and grow industrial workplaces**

Quantum: Update 2024

**>200**

**members**

# Swissphotonics network stands for

- Networking, interactive workshops, breaks, apero riche for personal matchmaking
- Successful matchmaking between industry needs and academia efforts, working the value chain from idea to market
- Active participation in EU projects, Phorwards21, Carla 360 and PhotonHub Europe
- Strong worldwide international network
- 200 members and increasing (2/3 SMEs) supporting initiatives of its members




**SPIE.**

**OPTICA**

**International Optoelectronics Association**

# Recent Swiss photonics support actions

## ➤ Photonics Switzerland Brochure

- Highlights the strength of Switzerland  in photonics.
- Is vivid and cutting-edge
- Details the Swiss photonics activities and Swiss companies across the world
- Promotes the Swiss photonics activities in Switzerland, Europe and worldwide.



# Recent Swiss photonics support actions

## ➤ Swiss Photonics Integration Center (Swiss PIC)



Switzerland has strong actors – academic research, start-ups, SMEs

Challenges in Photonics Packaging

- *Supporting Technologies* are not core enough to invest internally → dependency on external providers

«Only light in fiber is good light»

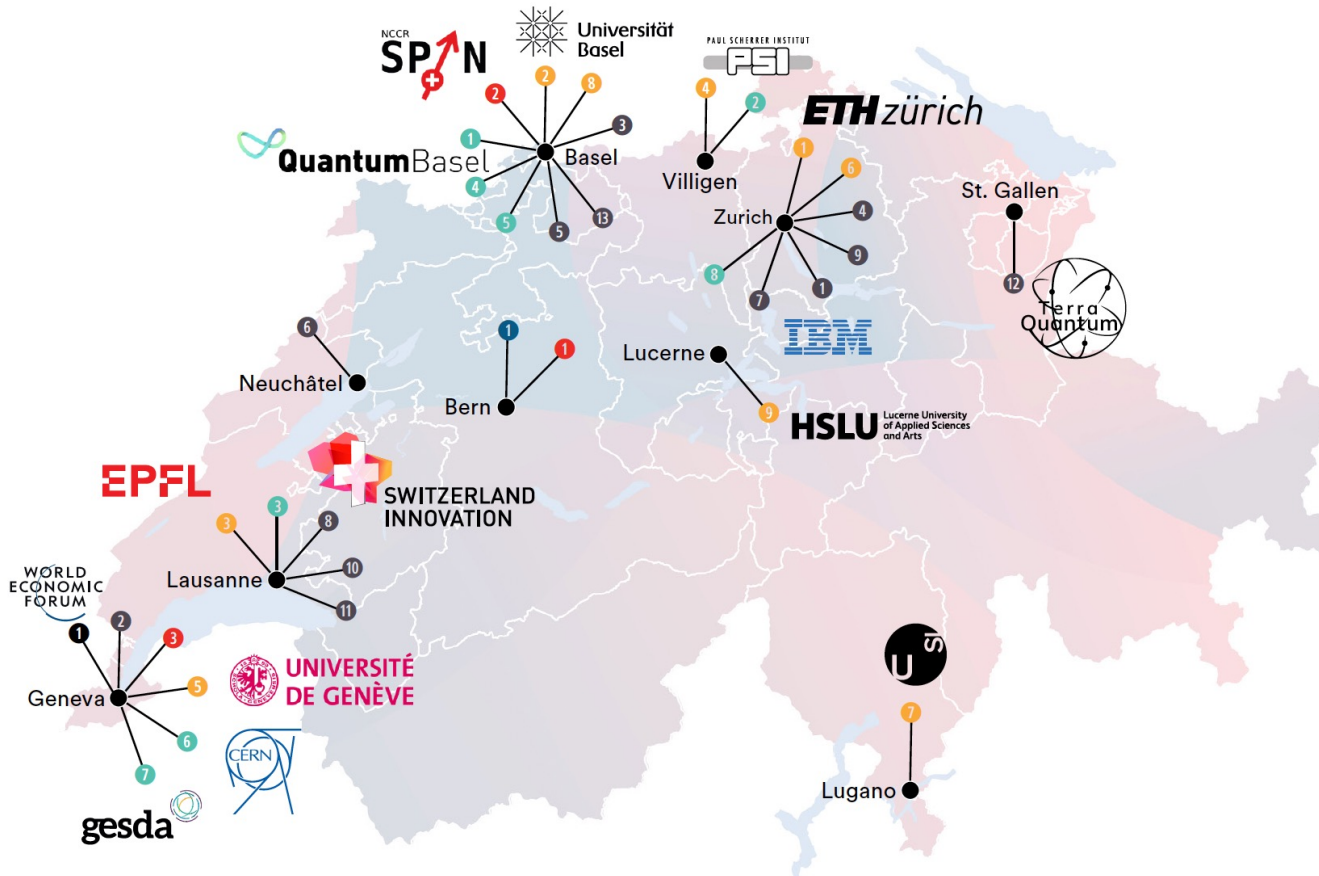
# Recent Swissphotonics support actions

- **2<sup>nd</sup> edition of the Swiss-Polish Cooperation Programme**
  - The Innosuisse NCBR tender is to be published in April (likely on 10.04.2024)
  - Swissphotonics contact: Christoph Harder, [harder@swissphotonics.net](mailto:harder@swissphotonics.net)
  
- **Offset Business**
  - A few billion to be spent in Switzerland in the next 10 years by Lockheed, Raytheon, etc. where we (Switzerland) buy weapons
  - Swissphotonics mission:
    - Direct offset business to Swiss high Tech Start-ups and SMEs
  - Swissphotonics contact: Christoph Harder, [harder@swissphotonics.net](mailto:harder@swissphotonics.net)

# Recent Swissphotonics support actions

## ➤ Switzerland:

- A quantum cluster



## ➤ Support by Swissphotonics

- Swiss Quantum Initiative

- Dedicated information on webpage



- UNESCO international Year of Quantum Science and Technology Quantum Initiative



INTERNATIONAL YEAR OF  
Quantum Science  
and Technology

# Join our **SWISS PHOTONICS** workshops



## 2023 Swissphotronics events included

- 8.06.2023: Photonics4Masterpieces, Geneva
- 12.9.2023: Robotics and Automation, FHGR
- 04.12.23: Photonics 4 Space, Brugg-Windisch

## 2024 Swissphotronics events

- 21.3.2024 Photonics Integration and Packaging
- 13.6.2024 Photonics 4 Masterpieces
- 21.6.2024 Swissphotronics PIC Convention
- 9.9.2024 Visual inspection for quality control and traceability
- 4./5.9.2024 Precision Photonic Systems '24 (Photonic sensor session)



# Join our lunch chats

- **Time: Tuesday Lunch time**

- Open to all member organizations, no password
- Weekly topic announced
- on website & LinkedIn



- **Next:**

- Tue, 26.3.2024      Luxtelligence
- Tue, 9.4.2024:      Photonics21
- Tue, 23.4.2024:    Chips made in Switzerland are visible!

**Swissphotonics**  
1,570 followers  
1mo · 🌐

**#Focus #tunable #liquid #lenses** overcome limits in depth of field by using membranes that change their curvature in response to an electrical signal. Join us for next week's **Swissphotonics** lunch chat by **David Leuenberger, MBA**, Head of Product Management at **Optotune**. He will talk about Optotune's liquid lens portfolio and how key issues of liquid lenses such as thermal drift, gravity coma and lack of suitable AR coatings are addressed. He will show applications in the fields of **#imaging, #laser #processing, #medical**, and head-mounted displays for **#AR / #VR**, see <https://lnkd.in/dVGDtQUx>

**Swissphotonics Optotune #photonics #tunable #lenses**



**Swissphotonics**  
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Are you curious about the various functionalities **#nanopatterned** material surfaces can bring? Join us for next week's **Swissphotonics** lunch chat by **Veronica Savu**, CEO of **Morphotonix** who will talk about these functionalities including controlled wettability, **#photonics** and antibacterial properties, optimized interface between implants and human tissue, and brand differentiation via **#diffractive #designs**. She will show how Morphotonix pattern range, long tool lifetime, its free-form geometry and its easy maintenance complement laser and Nickel shim technologies, and what this brings to the industry, see [https://lnkd.in/eUeDS-\\_c](https://lnkd.in/eUeDS-_c)

**Swissphotonics Morphotonix #photonics**



# Photonics Integration and Packaging

Start Time	Stop time	Session Title	Chair	Presenter	Company	Title of presentation
11:00	12:00	Registration and coffee				
11:00	13:00	Labtour	Andreas Voelker			
12:00	13:00	Lunch	CSEM			
13:15	13:30	Welcome	Christoph Harder	Peter Moselund, Guillaume Basset, Christian Bosshard		Welcome
13:30	13:50	Industrial packaging (requirements)	Christoph Harder	Maxim Karpov	Enlightra	Challenges of PIC packaging for nonlinear
13:50	14:10	Industrial packaging (requirements)	Christoph Harder	Marcus Duellk	EXALOS	Micro-optical free-space assembly for semiconductor light sources from the visible to
14:10	14:30	Industrial packaging (requirements)	Christoph Harder	Nikolaus Flöry	Variooptics	Board-Level Photonics: Embedded Waveguides solving Photonic Chip Assembly Bottlenecks
14:30	15:00	Networking	CSEM			
15:00	15:20	Components and processes	Peter Moselund	Myun-Sik Kim	Axetris	An Industrial Perspective: How Microlenses Define the Path of Photonics Integration
15:20	15:40	Components and processes	Peter Moselund	Rolando Ferrini	Femtoprint	From high-precision glass micro-components to monolithically integrated glass micro-systems for fiber-to-chip connectivity
15:40	16:00	Components and processes	Peter Moselund	Ivan Shorubalko	EMPA	Towards a digital Lippmann camera: integration challenges
16:00	16:30	Networking	CSEM			
16:30	16:50	Packaging services	Andreas Voelker	Tobias Lamprecht	OST	Microtechnology approaches for customized
16:50	17:10	Packaging services	Andreas Voelker	Mark Fretz	CSEM	Photonic chip integration strategies for micro-
17:10	17:30	Packaging services	Andreas Voelker	Peter Moselund	Swiss PIC	PIC Packaging and Swiss PIC
17:30	19:00	Networking	Swiss PIC			