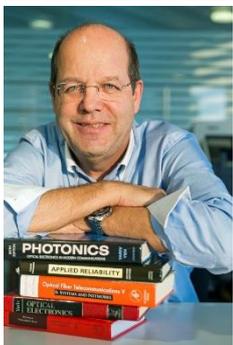


CTO Day - Speaker

Webinar: Innovation in Photonics Technologies

Tuesday, 10 November 2020



Dr. Christoph S. Harder

President Swissphotonics NTN, 8832 Wollerau SZ

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Dr. Christoph S. Harder received the ETH Diploma in 1979 and the Master and PhD in EE in 1980 and 1983 from Caltech, Pasadena, USA. He is cofounder of the IBM Zurich Laser Diode Enterprise which pioneered the first 980nm high power pump laser for telecom optical amplifiers and laser diodes for industrial and consumer applications with ultrahigh reliability. He is the recipient of a Fulbright scholarship and the OSA Fellow recognition. Christoph is now heading a consulting company and is cofounder of Swissphotonics and has been its president for the last few years. He has published more than 100 papers and 20 patents and has held a variety of staff and management positions at ETH, Caltech, IBM, Uniphase, JDS Uniphase, Nortel and Bookham and has volunteered on society boards and committees.

Photonics Technologies, enabler for novel product-functions

The challenges and opportunities of a CTO within the company and in the global competitive landscape will be summarized, especially towards programming the essential points in the upcoming *Innovation Booster* events.



Werner Küsi

President Swissem Division Photonics, Member of the Board of FISBA AG, 9016 St. Gallen

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2019 –	Board Memberships (see below)
2016 – 2018	Managing Director FISBA US, Tucson AZ
1993 – 2015	CEO FISBA AG, St.Gallen
1979 – 1990	LEICA / WILD HEERBRUGG Project-Mgr./ Product-Mgr. / Sales-Mgr.
2013 –	President SWISSMEM Photonics Industry Division
2018 –	Member of the Board of RhySearch, Research Institute
2015 –	Member of the Board of FISBA AG
1977	BSc. in Geodetic Engineering and Surveying University of Applied Sciences, FHNW

Photonics Technology Switzerland and Innosuisse NTN Innovation Booster Photonics

Photonics Technologies will penetrate all areas of modern applications and business – as electronics did and continuously does. They bear a vast potential for solutions of the many challenges of modern society. Via the new *NTN Innovation Booster Photonics* they shall contribute to disruptive, attractive innovations and USPs for Swiss companies, based on cross-technological approaches and applying modern ideation-methods.



Dr. Christian Bosshard

Manager Swissphotonics NTN and Vice-President Center Muttenz CSEM SA, 4132 Muttenz BL

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Dr. Christian Bosshard received his degree in Physics (1986) and his doctorate (1991, Silver medal award) from ETH. Christian is a Fellow of the Optical Society of America (OSA), managing director of the Swissphotonics technology network, board member of EPIC, and member of the Board of Stakeholders of Photonics21.

Presentation: Access to Pilot Lines

The European Commission launched several Pilot Lines on topics such as photonics based diagnostics, mid-infrared sensing, photonic packaging and free-form microoptics. These Pilot Lines act a single entry point and provide a sustainable access to the different technologies to support SME's and larges companies. They help to accelerate innovation and provide an easy-access route to transferring R&D results to the market.



Dr. Lukas Krainer

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- 2019 CEO & founder Prospective Instruments GmbH
- 2017-2018 NKT Photonics A/S (Denmark), Regensdorf, Switzerland: Integration manager und consulting after the acquisition of Onefive GmbH & A.L.S. GmbH by NKT Photonics A/S.
- 2012-2017 Swissphotonics NTN association: Executive board member.
- 2005-2017 European Commission: FP6, FP7, H2020 proposal evaluation & project monitoring.
- 2008-2017 Advanced Laser Diode Systems A.L.S. GmbH, Adlershof, Berlin: CEO and co-owner.
- 2005-2017 Onefive GmbH, Zurich/Regensdorf, Switzerland: CEO, co-founder & co-owner.
- 2005-2006 GRE Inc., Head of R&D department: RFID label printing solutions for industrial digital printing.
- 2003-2005 Post-Doc at the Institute for Quantum Electronics, Prof. Ursula Keller, ETH Zurich.
- 2001-2003 GigaTera, Principal Laser Scientist; Zurich.
- 1998-2002 PhD, Institute of Quantum Electronics, Prof. Ursula Keller, ETH Zürich.

CTO's Requirement on CEO

A new generation of turn-key multi-photon microscopes enable a variety of imaging modalities in a compact, easy-to-use form factor. Combined with deep-learning image staining, new applications in the field of digital- and instant-pathology will be enabled.



Dr. Francesco Kienzle

Horizon 2020 Advisor for ICT and Future Emerging Technologies at Euresearch Network Office, 3008 Bern

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Francesco Kienzle is the Swiss advisor (aka National Contact Points NCPs) for the Horizon 2020 programmes Information and Communication Technologies as well as Future and Emerging Technologies. After a PhD in astrophysics at the University of Geneva he worked ten years as IT application manager for PostFinance. Since 2014 he is NCP at Euresearch.

Access to EU Funded Projects

2020 is the last year of Horizon 2020, distributing 14 billion €, the highest budget ever in the history of European Framework Programme. Photonics is one of the *Key Enabling Technologies* supported by Horizon 2020 funding projects ranging from photonics applications to more early technology development or fundamental research. The presentation will focus on opportunities for companies.



Dr. Antje Rey

Innosuisse Special Coach, Patent Attorney at E. Blum & Co. AG, 8044 Zürich

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Antje Rey is a qualified European and Swiss patent attorney and partner of Blum, an IP firm in Zurich. She is accredited as Innosuisse special coach for IP. Antje Rey studied mechanical engineering at ETH Zurich and the University of California Berkeley. She worked as a researcher at IBM Research Zurich during her doctoral studies in the fields of nanoelectronics and nano-optics.

NTN-Inno-Booster: IP Risks and Opportunities

NTN-Innovation Boosters contribute to encourage formats for the joint development of ideas of the participating innovation teams. Such open innovation might offer opportunities but might also pose risks from an intellectual property perspective. How can you leverage IP and avoid pitfalls in such contexts?



Dr. Markus Rossi

Vice President, Head of Innovation Office, ams International AG, A-8141 Premstaetten Austria

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Studied physics at ETHZ, PhD in micro-optics from university Neuchatel, started Heptagon as spin-off from CSEM Zurich in 2000. Jan 2017: acquisition of Heptagon by ams AG. Now head of innovation office, ams AG

Rational for Strong Investment in Innovative Solutions

Innovation in optical sensor solutions for consumer electronics requires leading expertise in several distinct technologies as well as a deep system and application understanding. This talk will present some recent examples.



Dr. Eckhard Deichsel

Head of Laser Technology at Bystronic Group, 3362 Niederönz BE

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2003 Dr.-Ing. degree in electronics engineering (laser technology) from University Ulm, Germany
2003-2006 PostDoc EPFL / Scientist at Beamexpress
2006-2011 Head of Diode Laser Development at Jenoptik, Germany
since 2012 Head of Laser Technology at Bystronic, Switzerland

Value Proposition for Participation in Funded Research Program

Funded research projects and long-term collaboration with national and international research institutes have a long history at Bystronic. Examples will be shown where research projects lead to sustainable innovation and commercial success. Challenges are finding right partners and balancing fundamental research vs. industrial requirements.



Dr. iur. Stefan Brupbacher

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Dr. Stefan Brupbacher is Director of Swissmem, the leading association for SMEs and large companies in Switzerland's mechanical and electrical engineering industries (MEM industries) and related technology-oriented sectors. He studied law at the University of Zurich and received his doctorate there. He also holds an Executive Master in International and European Business Law from the University of St. Gallen and a Master in International Affairs specializing in International Economics from the John Hopkins University (SAIS) in Bologna and Washington DC. From 2014 to 2018 he was Secretary General of the Federal Department of Economic Affairs, Education and Research (EAER / WBF). In previous positions, he gained a broad range of professional experience, including as Head of the Secretariat of the Economic Affairs and Taxation Committees (EATC / WAK) of the National Council and the Council of States and as Deputy Head of International Labour Affairs at the State Secretariat for Economic Affairs (SECO).

Swissmem Policy and Activities in Innovation

Innovation is the driver of success for the Swiss MEM-Industry. Switzerland traditionally enjoys a good ranking, however, lacks in the field of collaborative innovation. For disruptive advances and strong USPs, our industry with its CTOs needs access to novel technologies, competence in modern innovation-methods and an innovation-friendly company culture. Swissmem provides professional support to companies and their CTOs in all three areas.