



EPFL aqualab

User Group meeting

March 21 – 23, 2022

Hotel Le Chamois
Route de Pillon
Les Diablerets
Switzerland



**WELCOME TO THE
USER GROUP MEETING**

<https://epfl.zoom.us/j/62012455215>



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PROGRAM

All times are in Central European Time

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Sunday, March 20th

20:00 Welcome dinner at the Hotel Le Chamois

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Monday, March 21st – Session 1

14:30 Welcome address – **Edoardo Charbon**, EPFL

15:00 Computer vision, one photon at a time – **Mohit Gupta**, University of Wisconsin

15:30 Quantum imaging with SPAD arrays – **Daniele Faccio**, University of Glasgow

16:00 Imaging and time-stamping for quantum applications – **Andrei Nomerotski**, Brookhaven National Laboratory

16:30 Tea/coffee break

17:00 Improving surgical vision during minimally-invasive procedures – **Sylvain Gioux**, Intuitive Surgical

17:15 Towards Ultrafast Quantum Optics Probed with a SPAD Array Spectrometer – **Ron Tenne**, University of Konstanz

17:30 Imaging of oral cancer with high-resolution SPAD camera – **Ulas Sunar**, Wright University

18:00 SwissSPADxx: quo vadis? – **Michel Antolovic**, PI Imaging Technology

18:30 Discussion

19:00 End

20:00 Social dinner at the Hotel Le Chamois

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Tuesday, March 22nd – Session 2

14:30 Heralded spectroscopy with a linear SPAD array spectrometer – **Dan Oron**, Weizmann Institute

15:00 2D crystal defects in liquids: towards single photon sources and nanoscale sensors – **Nathan Ronceray & Evgenii Glushkov**, EPFL

15:30 SPAD Imagers for subsurface fluorescence-guided surgical navigation – **Petr Brůža**, Dartmouth College

16:00 Correlation plenoptic imaging based on SPAD technology – **Milena D'Angelo**, University of Bari

16:30 Tea/coffee break

17:00 The 3DQ project – **Ted Laurence**, Lawrence Livermore National Labs

17:30 NIR Fluorescence Lifetime Imaging with SwissSPAD2 – **Jason Smith**, Rensselaer Polytechnic Institute

18:00 LinoSPADxx, Piccolo/Ocelot: quo vadis? The xxPhase projects – **AQUA Lab**, EPFL

18:30 Discussion

19:00 End

20:00 Gala dinner at the Hotel Le Chamois



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Wednesday, March 23rd – Session 3

13:30 FPGA and SPADs – **Francesco Regazzoni**, Alari, University of Lugano

14:00 Towards VLSI integration of RFF for applications in cyber security, AI, and more – **Mario Stipčević**, Ruđer Bošković Institute

14:30 A new frontier of multimodal imaging: combining optics and MRI – **Wuwei Ren**, ShanghaiTech University, China

15:00 SPAD-based near-infrared optical tomography to image the brain – **Martin Wolf**, USZ

15:30 Signal processing for single-photon detectors – **Vivek Goyal**, Boston University

16:00 Tea / coffee break

16:30 Get the most out of your SPAD: "Single-molecule localization that achieves theoretically minimum uncertainty" – **Carlos Smith**, Delft University of Technology

17:00 SwissSPAD 1, 2, 3 to infinity and beyond – **Xavier Michalet**, UCLA

17:30 Quantum and classical computing exploiting complex media – **Sylvain Gigan**, Université Sorbonne

18:00 Discussion

18:20 End of the meeting

NB: red text indicates that the talk will be delivered remotely.

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Thursday, March 24th – AD HOC meetings in Neuchâtel

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Friday, March 25th – AD HOC meetings in Neuchâtel

LIST OF PARTICIPANTS

Ackermann, Meret; University of Zurich
Ankri, Rinat; Ariel University
Antolovic, Michel; Pi Imaging Technology
Ardelean, Andrei; EPFL AQUA
Bauer, Sebastian; Ubicept
Beer, Stephan; Intuitive Surgical
Benserhir, Jad; EPFL AQUA
Bernasconi, Ermanno; EPFL AQUA
Bond, Tiziana; LLNL
Bruschini, Claudio; EPFL AQUA
Bruza, Petr; Dartmouth College
Burri, Samuel; EPFL AQUA
Cabasse, Cécile; Intuitive Surgical
Charbon, Edoardo; EPFL AQUA
Conradt, Frieder; University of Konstanz
D'Angelo, Milena; Università degli studi di Bari
Defienne, Hugo; University of Glasgow
Efe, Baris Can; EPFL AQUA
Faccio, Daniele; university of Glasgow
Fathi, Faraneh; University of Kentucky
Fenoglio, Carlo Alberto; EPFL AQUA
Florin, Claude; Fastree3D
Gigan, Sylvain; Sorbonne Université
Gioux, Sylvain; Intuitive Surgical
Glushkov, Evgenii; EPFL LBEN
Goyal, Vivek; Boston University
Gramuglia, Francesco; EPFL AQUA
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Hoebe, Ron; Amsterdam UMC
Homulle, Harald; Pi Imaging
Huang, Shu-Wei; University of Colorado Boulder
Intes, Xavier; Rensselaer Polytechnic Institute
Jara Casas, Luis Miguel; Spiden
Jiang, Jingjing; University of Zurich
Jirsa, Jakub; Czech Technical University in Prague (CTU)
Kalyanov, Alexander; University of Zurich
Keshavarzian, Pouyan; EPFL AQUA
Kizilkan, Ekin; EPFL AQUA
Kulkov, Sergei; FNSPE CTU in Prague
Lapkiewicz, Radek; University of Warsaw
Laurence, Ted; Lawrence Livermore National Laboratory
Lin, Yang; EPFL AQUA
Liscidini, Antonio; University of Toronto
Liu, Feng; EPFL AQUA
Livi, Paolo; Spiden AG
Lubin, Gur; Weizmann Institute of Science
Manoj, Bikumandla; Facebook/Meta
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Marcisovsky, Michal; FNSPE CTU in Prague
Massaro, Gianlorenzo; INFN - Sezione di Bari
Michalet, Xavier; UCLA
Mohtasebi, Mehrana; University of Kentucky
Monteil, Ennio; Spiden AG
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Mouzakidou, Kyriaki; EPFL - TOPO lab
Muntean, Andrada; EPFL AQUA
Nomerotski, Andrei; BNL
Oron, Dan; Weizmann Institute
Pesic, Vladimir; EPFL AQUA
Regazzoni, Francesco; University of Amsterdam and Università della Svizzera italiana
Ren, Wuwei; ShanghaiTech University
Ripiccini, Emanuele; EPFL AQUA
Ronceray, Nathan; LBEN - EPFL
Russomanno, Emanuele; University of Zurich
Saudan, Cyril; Pi Imaging
Sgalaberna, Davide; ETH Zurich
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Smith, Carlas; TUD
Stipcevic, Mario; Ruder Boskovic Institute
Sunar, Ulas; wright state University
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Venialgo, Esteban; Delft University of Technology
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Yu, Guoqiang; University of Kentucky
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