FULL PROGRAMME — IFDEPS 2018

International Forum on Detectors for Photon Science

Annecy, 11-14 March 2018

programme updated on: 7 March 2018

Sunday 11 March

13:00	*Bus departure from Geneva Central Railway Station (Gare Cornavin)*
14:30	*Arrival to forum venue (Les Trésoms Hotel, Annecy)*

Session 1 - IFDEPS Opening *Chair: P. Fajardo*

16:00	Welcome address – (IFDEPS Local Organizers)
16:10	Motivation and goals of IFDEPS – Takaki Hatsui (IFDEPS Programme Organization)
16:30	Opening talk: Michael Krisch (ESRF, France) – *Detection: from the dark ages to the X-ray detectors for future SR and FEL photon sources*
17:10	Questions and clarifications
17:45	*Guided tour of Annecy and dinner at a Savoy cooking restaurant: bus departure from the hotel*
22:30	*Return to the hotel*

Monday 12 March

Session 2 - Update on development activities at photon sources *Chair: G. Carini*

8:30	Short summary overviews from participating facilities. Contributions from: ALS, APS, BNL, CLS, LNLS, SLAC, NSRRC, SACLA, SSRF, ALBA, DESY, DLS, European XFEL, ELETTRA, ESRF, PSI, SOLEIL
10:20	*Coffe break*

Highlight Topic: Energy dispersive detection

Session 3 - Semiconductor sensors for X-ray spectroscopy *Chair: P. Siddons*

10:45	Rainer Richter (MPG HLL, Germany) – *Sensor ideas for photon science detectors developed at the MPG Semiconductor Lab*
11:15	Andrea Castoldi (Politecnico de Milano, Italy) – *The path towards germanium drift detectors*
11:45	Paul Sellin (U. Surrey, UK) – S*pectroscopic performance of high-Z sensor materials*
12:15	Discussion
12:30	*Lunch*

Highlight Topic: Energy dispersive detection

Session 4 - Readout architectures for high count rate energy dispersive detection systems *Chair: M. Porro*

14:00	Carlo Fiorini (Politecnico de Milano, Italy) – *Ultimate throughput and energy resolution of analog pulse processing front-ends*
14:30	Paul O'Connor (BNL, US) – *Power-aware design of highly integrated systems*
15:00	Paul Scoullar (Southern Innovation, Australia) – *Advanced pulse processing techniques for synchrotron and other high rate applications*
15:30	Discussion
15:45	*Coffe break*

Highlight Topic: Energy dispersive detection

Session 5 - Advanced multielement and position sensitive energy dispersive detectors *Chair: R. Menk*

16:00	Johannes Treis (MPG HLL, Germany) – *Status, prospects and challenges of state-of-the-art detector system integration*
16:20	Peter Siddons (BNL, US) – *The Maia detector system: a new way to do scanning probe fluorescence imaging*
16:40	Abdul Rumaiz (BNL, US) – *Multi-element germanium detectors for synchrotron applications*
17:00	Graham Dennis (DLS, UK) – Advanced d*igital pulse processing applied to monolithic segmented detectors for spectroscopy*
17:20	Matthew Veale (STFC, UK) – *High Energy X-ray Imaging Technology (HEXITEC): development of a spectroscopic X-ray imaging camera*
17:40	Discussion
19:30	*Dinner*

Tuesday 13 March

Highlight Topic: Energy dispersive detection

Session 6 - Detection technologies for high resolution spectroscopy *Chair: A. Miceli*

8:30 Douglas Bennett (NIST, US) – *Current and future capabilities of transition-edge sensor microcalorimeters for X-ray beamline science*

9:00 Masataka Ohkubo (AIST, Japan) – *Superconductor Tunnel Junction (STJ) soft X-ray detectors for synchrotron radiation facilities*

9:30 Andreas Fleischmann (U. Heidelberg, Germany) – *Magnetic micro-calorimeters for atomic and particle physics*

10:00 Simo Huotari (U. Helsinki, Finland) – *Wavelenght dispersive spectrometers*

10:30 Discussion

10:45 *Coffe break*

Session 7 - First operation experiences with new detectors *Chair: H. Graafsma*

11:00 Sang Jun Lee (SSRL/SLAC, US) – *The first two years of transition-edge sensor (TES) spectrometer at SSRL*

11:20 Matthew Hart (STFC, UK) – *The Large Pixel Detector for the European XFEL: overview of the system and experience of operation at the FXE beam line*

11:40 Jolanta Sztuk-Dambietz (EU-XFEL, Germany) – *1 Mpix Adaptive Gain Integrating Pixel Detector (AGIPD) for European XFEL: installation, commissioning and first user operation at SPB/SFX instrument*

12:00 Aldo Mozzanica (PSI, Switzerland) – *Status of the JUNGFRAU project: detector design and result from the SwissFEL pilot experiment phase*

12:20 Discussion

12:30 *Lunch*

Session 8 - Overview of DAQ general strategies at large facilities *Chair: P. Denes*

14:00 Marcus Kuster (Eu-XFEL, Germany) – *Detector calibration and data acquisition environment at the European XFEL*

14:20 Jana Thayer (SLAC, US) – *Building a data system for LCLS-II*

14:40 Takaki Hatsui (RIKEN SPring-8, Japan) – *DAQ system at SACLA and future plan for SPring-8-II*

15:00 Pablo Fajardo, (ESRF, France) – *Current and planned technical solutions at ESRF for high throughput data acquisition and management*

15:20 Discussion

15:45 *Coffe break*

Session 9 - Technologies for high-throughput data acquisition *Chair: B. Schmitt*

16:00 Tomasz Hemperek (U. Bonn, Germany) – *High bandwidth data transfer in and off-chip for HEP: modeling, design and verification*

16:30 Sebastian Dittmeier (U. Heidelberg, Germany) – *The Mu3e data acquisition system: handling Terabits per second*

17:00 Emilio Meschi (CERN, Switzerland) – *Modern DAQ architectures for HEP experiments: intelligent detectors and smart data reduction in the era of Big Data*

17:30 Discussion

19:30 *Dinner*

Wednesday 14 March

Session 10 - Future of photon science detectors *Chair: T. Hatsui*

8:30 Summary and outlook of presented topics – by session chairs – and round table / discussions

10:30 Future IFDEPS events - closing remarks

11:00 *Bus departure to Geneva*

12:30 *Estimated arrival to Geneva*