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Davide Bleiner

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Contents

- v *Conference Committee*
vii *Introduction*

LIGHT SOURCES

- 8678 02 **Ultrafast phenomena at the nanoscale: novel science opportunities at the SwissFEL X-ray Laser (Invited Paper)** [8678-15]
B. D. Patterson, R. Abela, H.-H. Braun, R. Ganter, B. Pedrini, M. Pedrozzi, S. Reiche, M. van Daalen, Paul Scherrer Institute (Switzerland)
- 8678 03 **Plasma-based XUV lasers (Invited Paper)** [8678-7]
A. Klisnick, Institut des Sciences Moléculaires d'Orsay, CNRS, Univ Paris-Sud 11 (France)
- 8678 04 **Vacuum-ultraviolet lasers and spectroscopy (Invited Paper)** [8678-23]
U. Hollenstein, ETH Zürich (Switzerland)
- 8678 05 **Modelization of seeded soft x-ray lasers using plasma amplifiers from solid (Invited Paper)** [8678-20]
E. Oliva, P. Zeitoun, Lab. d'Optique Appliquée, ENSTA ParisTech, CNRS, École Polytechnique ParisTech (France)
- 8678 06 **Comparison of laboratory-scale XUV laser with xFELs (Invited Paper)** [8678-9]
D. Bleiner, Univ. of Bern (Switzerland)
- 8678 07 **Lab-scale EUV nano-imaging employing a gas-puff-target source: image quality versus plasma radiation characteristics (Invited Paper)** [8678-4]
P. Wachulak, A. Bartnik, H. Fiedorowicz, Military Univ. of Technology (Poland)

OPTICS AND METHODS

- 8678 08 **Laboratory full-field transmission x-ray microscopy (Invited Paper)** [8678-17]
C. Seim, J. Baumann, Technische Univ. Berlin (Germany); H. Legall, Technische Univ. Berlin (Germany) and Max-Born-Institut (Germany); C. Redlich, I. Mantouvalou, Technische Univ. Berlin (Germany); G. Blobel, H. Stiel, Max-Born-Institut (Germany); B. Kanngießer, Technische Univ. Berlin (Germany)
- 8678 09 **Ptychography: early history and 3D scattering effects (Invited Paper)** [8678-6]
J. M. Rodenburg, The Univ. of Sheffield (United Kingdom)
- 8678 0A **Schwarzschild objective and similar two-mirror systems (Invited Paper)** [8678-2]
I. A. Artyukov, P.N. Lebedev Physical Institute (Russian Federation)

- 8678 0B **Using submicron-resolution LiF crystal and film x-ray detectors for the near and far fields in-situ characterization of soft x-ray laser beams (Invited Paper)** [8678-3]
T. A. Pikuz, A. Ya. Faenov, Japan Atomic Energy Agency (Japan) and Joint Institute for High Temperatures (Russian Federation); Y. Fukuda, Japan Atomic Energy Agency (Japan); Y. Kato, The Graduate School for the Creation of New Photonics Industries (Japan); T. Kawachi, M. Kando, Japan Atomic Energy Agency (Japan)

APPLICATIONS

- 8678 0C **Investigating the effects of laser intensity and pulse duration on 6.7-nm BEUV emission from Gadolinium plasma (Invited Paper)** [8678-24]
T. Cummins, Univ. College Dublin (Ireland); T. Otsuka, Utsunomiya Univ. (Japan); N. Yugami, Utsunomiya Univ. (Japan) and Japan Science and Technology Agency (Japan); W. Jiang, Nagaoka Univ. of Technology (Japan); A. Endo, Institute of Physics of the ASCR, v.v.i. (Czech Republic); B. Li, C. O'Gorman, P. Dunne, E. Sokell, G. O'Sullivan, Univ. College Dublin (Ireland); T. Higashiguchi, Utsunomiya Univ. (Japan) and Japan Science and Technology Agency (Japan)
- 8678 0D **Elemental analysis with x-ray fluorescence spectrometry (Invited Paper)** [8678-12]
P. Lienemann, Univ. of Applied Sciences (Switzerland); D. Bleiner, Univ. of Bern (Switzerland)
- 8678 0E **X-ray spectromicroscopy (Invited Paper)** [8678-11]
A. Michette, King's College London (United Kingdom)
- 8678 0F **Imaging with plasma based extreme ultraviolet sources (Invited Paper)** [8678-16]
L. Juschkin, RWTH Aachen (Germany) and JARA - Fundamentals of Future Information Technology (Germany)

Author Index

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Introduction

In a few panel discussions, participants debate the issue on what kind of educational profile is the most suitable for making the new generations competent and successful. Some argue that a professional is uniquely distinguished by a certain *in-depth* understanding on the field she/he is mastering. Such in-depth understanding is a maturation process through hands-on experience that turns a student into a professional. The former is evaluated against a standardized set of know-hows, while the latter on a very specific history that through a number of particular projects has developed her/his mindset.

In-depth knowledge can however make the professional too narrow-sighted and limited in scope. The risk is that people can only do what they have already done. The ultimate risk is thus that we train skillful mouse-clickers! Therefore, it is argued in those panel discussions, *generalists* are to be seen as an added-value, i.e., professionals with a leadership thanks to “a vision beyond the horizon.”

Nevertheless, there is a third way, namely the “generalists” that become such because matured through multidisciplinary in-depth expertise. This is however only possible under two conditions. First, *aging*: A young person has by definition a limited project record, and only with the passing years she/he can make a way across a richer multidisciplinary portfolio. The second condition is *peer-level exchange*. Discussions, reviews, tutorials are essential to orient the maturation process and multiply the in-depth visions.

The Short-Wavelength Imaging and Spectroscopy (SWISS) workshop was such an attempt, to pave the way into the third way. Understanding that many scientific cases in nano-imaging, ultrafast spectroscopy, and materials characterization require multidisciplinary in-depth education, a number of papers have been invited to bridge such a gap. The idea was to orient, and to stimulate a process of in-depth understanding by highlighting the relevant issues on light sources, imaging, optics, data processing, diagnostics, etc. All in all knowledge, like a laser, also develops out of a noise that we call *brainstorming* and can only grow if within an *exciting* context!

Davide Bleiner

