

BNC webinar 14 October, 2020 – Introduction (Ib)

Short pulsed analysing radiation of high intensity enables us to study evolution of chemical, biological processes, fast structural transformations. Recently commissioned high brilliance photon sources, synchrotrons, optical and x-ray lasers produce unprecedentedly high energy density on the target at a high repetition rate never seen before – opening fields of exciting research of reactions that have been far too rapid to be captured by former methods. Hungarian researchers have successfully contributed to the construction of EU infrastructures, the Extreme Light Source (ELI) and the European X-ray Free Electron Laser (EuXFEL) and have gained regular access to these state-of-the-art experimental facilities.

With the help of the distinguished presenters of the next BNC webinars we look deeper into this field to learn about the principles, present applications and future promises of the advanced pulsed photon sources. We hope these webinars will help colleagues to count on these large facilities and more and more of us will use these facilities in their projects.

Our first presenter is Gyula Faigel. His presentation is entitled:

„Pulsed x-ray sources and their applications”

Gyula's work has been connected to gamma rays and x-rays from his early carrier. He did his first synchrotron experiment in 1985 at the Brookhaven National Laboratory on nuclear resonant scattering. Later he did various types of experiments at several synchrotrons and also at XFELs. He - together with his colleague Miklós Tegze - developed the atomic resolution holography. Lately, he has been involved in single molecule and single pulse imaging experiments at XFEL-s. He has strong connections to large X-ray facilities through his membership of scientific advisory committees like ESRF-SAC, EU XFEL SAC and ELI SAC. Gyula Faigel is a regular member of the Hungarian Academy of Sciences.

Gyula, we are very much looking forward to your presentation. So, please.