

### **Editorial Proc. UCANS 10 Conference, Budapest, October 16 – 19, 2023**

Compact accelerator-based neutron sources (CANS) are a strong alternative to reactor and spallation-based neutron sources and have been developed and installed at a number of universities and research institutes or corporations world-wide within recent few decades. These small sources have provided continuous impact in fundamental nuclear physics as well as in material sciences, engineering, metrology, and health.

With the progress in high current proton accelerator systems, various projects have started to develop, design, construct, and operate powerful high-current CANS (HiCANS) with the aim to be used as future small to medium-scale neutron sources to complement spallation and reactor-based sources in a world-wide neutron ecosystem.

The Union for Compact Accelerator-driven Neutron Sources (UCANS), an international organization of research institutes and neutron facilities, is organizing regular meetings to discuss the state of the art and developments on this topic since 2010. The UCANS 10 conference was held in Budapest, Hungary in October 16-19, 2023, with a strong world-wide attendance of many scientists and researchers.

The conference covered a broad range of topics including every aspect of compact sources, such as accelerator systems, neutron targets, moderators, detectors, neutron scattering instrumentation, imaging, isotope production, nuclear data evolution and medical applications. With a large number of recommended presentations and discussions at the conference the participants and organizers joint forces to publish presented works within a proceedings volume in the EPJ Web of Conferences.

The contributions published are grouped around the work regarding of technologies for accelerator neutron source development and cryogenic moderators, instrumentation, applications and projects and facility developments. While these articles represent only a fraction of all of the presented contributions within the UCANS 10 Conference, they demonstrate and highlight the progress and state-of-the-art in this strongly developing field. Upcoming conferences, workshops and UCANS meetings will show further progress and developments and the present proceedings support the discussions and activities to develop and optimize CANS and HiCANS.

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