Contribution ID: **20** Type: **Invited Talk**

Pulsed Magnetic Fields for Neutron Diffraction on IN22

Wednesday 26 November 2025 16:20 (20 minutes)

Over the past two decades, there have been significant advancements in neutron diffraction performed in high magnetic fields, with experiments now pushing boundaries to fields as high as 40 T. This progress stems from the development of specialized pulsed field devices, using either short or long duration pulsed magnets [1, 2]. In this presentation, I will provide an overview of the 2 K/40-T pulsed field-cryomagnet collaboratively developed by LNCMI-Toulouse, ILL-Grenoble, and CEA-Grenoble. This magnet has been in successful operation since 2015, serving the community on the CRG-CEA spectrometer IN22 at the ILL.
References
[1] S. Yoshii et al., Phys. Rev. Lett. 103 (2009) 077203.
[2] F. Duc et al., Rev. Sci. Instrum. 89 (2018) 053905.

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Session Classification: New facilities, new instruments III