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## **Polarized neutron diffraction as a supreme probe of atomic-scale magnetism**

*Wednesday, 11 December 2024 14:30 (45 minutes)*

Polarized neutrons are an essential tool in the study of magnetic materials at the atomic scale, providing information which in some cases cannot be obtained if only unpolarized neutrons are employed. In this talk I will introduce the different ways in which polarized neutron diffraction can be performed and the corresponding information that can be obtained. I plan to cover the techniques of uniaxial polarization analysis, XYZ polarization analysis, the half-polarized beam technique, and spherical neutron polarimetry. The strengths of these techniques will be illustrated by examples.

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**Session Classification:** Introductory lectures

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