PhD / Master (MSc) Positions in Magnetic Nanolayers and Nanostructures – group of PD Dr. habil. Amitesh Paul (GS-2020001)

The Materials Science and Engineering Program (group of Paul) is looking for 2 PhD/Master students to conduct experimental in magnetic nanolayer materials related to fundamental aspects of interface magnetism.

Contract for PhD: 3 + 1 years.

Project Details
Modern facilities for the growth of thin film samples using ultrahigh-vacuum sputtering and atomic layer deposition as well as state-of-the-art laboratory thin film characterization tools (X-ray diffraction, X-ray reflectometry, SQUID magnetometry, TEM) will be available. Our group extensively uses leading international Quantum Beam facilities (neutron/synchrotron science facilities and ion beam accelerators) as major research tools. Our specialty technique is polarized neutron reflectometry, small-angle-scattering in specular and off-specular modes and X-ray absorption. We work in a collaborative international environment.

Keywords
Magnetic nanostructures, multiferroics, magnetic oxide films, stress/defect engineering of novel physical properties, electronic/structural instabilities or phase transitions in magnetic thin films, polarized neutron/X-ray reflectometry.

Selection Criteria
– BSc degree for Master (MSc) / Master degree (or equivalent) in Physics or Material Science for PhD (essential)

– Strong background in condensed matter physics (preferable)

– Strong interest in thin film deposition and/or structural/magnetic characterization (essential)

– Strong interest in polarized neutron reflectometry or polarized synchrotron spectroscopy (essential)

– Strong interest to work temporarily at large-scale research facilities in China, Europe, United States, Japan and/or Australia (essential)

– Good communication skills, good command of English (essential)

– Ability to work independently as well as in a team environment (essential)

– Ability to author scientific reports and co-author scientific publications (essential)

– The PhD candidate must fulfill the requirements for admission to the Technion Graduate School and needs to comply with its regulations leading to the PhD/Master degree: https://graduate.technion.ac.il/en/prospective-students/