

## NOMATEN Hybrid Seminar

**Location:** NOMATEN seminar room (102)

**gotomeeting room (for online):** <https://meet.goto.com/NCBJmeetings/nomaten-seminar>

**Seminar date:** May 7<sup>th</sup>, 2025

**Time:** 1 PM (CET)

**Title:** Investigation of Surfaces and Interfaces of Solids Using Neutron Scattering

**Speaker:** Jarosław Majewski, Ph. D.

**Speaker affiliation:** Department of Chemical & Biological Engineering at the University of New Mexico, Albuquerque, US; Visiting Scientist at Los Alamos National Laboratory, Los Alamos, NM; Affiliated Professor at the University of Warsaw, Poland

**Abstract:** Neutrons due to their penetrability, non-perturbative nature, isotopic and low-Z elements sensitivity are perfect scattering tool to study variety of systems including interfaces in different environments.

I will briefly discuss basic properties of neutrons, methods of their production, and utilization to characterize material's properties. My presentation, among other systems, will cover (i) nano-composite layered structures which provide a basis to design structural materials for nuclear reactors with increased resistance to radiation degradation and novel mechanical properties (ii) chemical evolution of actinide layers under oxidative stress.

**Bio:** Until March, 2025, Dr. Jarosław (Jarek) Majewski was a Permanent Program Director at the National Science Foundation. Currently, he is on a sabbatical leave as an Affiliated Professor in the Department of Chemistry at the University of Warsaw, Poland.

He graduated from the Weizmann Institute of Science in Israel and, until 2017, served as an adjunct professor in the Department of Chemical Engineering, University of California, Davis. Currently, he is a Research Professor in the Department of Chemical & Biological Engineering at the University of New Mexico, Albuquerque.

He published 200+ peer-reviewed papers and gave an app. 200+ invited talks and over 200 other presentations. He is an elected fellow of the American Physical Society and the Neutron Scattering Society of America.

Part of his scientific career (1995-2019) has been spent at the Los Alamos National Laboratory (LANL), where he built a successful x-ray and neutron scattering program to address interfacial structures and properties of materials. His interests span from bio-interfaces and soft-condensed systems to hard-condensed hetero-structures, electrochemistry, and actinides.