



After completing the PhD thesis in solid state physics at University of Karlsruhe in 2009, Nadezda Bagrets started working in Karlsruhe of Technology for the Cryogene Materialtests Karlsruhe (CryoMaK) group in 2010. Being a reference lab for international ITER project, CryoMaK has an exceptional expertise in structural materials and superconductors testing in wide temperature range from room temperature to cryogenic temperatures. The focus of her scientific research lies on investigation and characterisation of mechanical and thermal properties of structural materials and technical superconductors for superconducting applications, such as current leads, power cables and magnets. Another research topic followed by Dr Bagrets is electro-mechanical testing of superconductors, starting from measuring of key properties of HTS wires (performance, thermal and mechanical properties), and going to tests on superconducting cables for magnet and power applications in KIT FBI facility (F – applied mechanical force, B- magnetic field, I-electrical current). Currently, main focus of the group is placed on characterisation of KIT CroCo cable both single strand and triplet cable for magnet windings. Dr Bagrets is closely involved in this topic, contributing both in experimental part and supplementing FEM analysis for these experiments.