RWTH Aachen University is one of Germany’s pre-eminent Universities of Excellence, which entails the highest quality in teaching and world-class research. RWTH addresses bold, scientific questions; it also assumes a profound responsibility toward society and transfers its knowledge into meaningful applications. RWTH strives for the convergence of knowledge, methods, and findings from its research fields and integrates in-depth disciplinary knowledge into interdisciplinary research consortia represented as profile areas. The university’s dynamic, creative, and international environment encompasses efficient research networks, institutionalized cooperations, and, most of all, the innovative RWTH Campus-Project which harbors one of the most extensive technology-oriented research landscapes in Europe.

Full Professor (W2, tenure track W2) in Magnetic Nanotechnology in Medicine

at the Faculty of Medicine/Uniklinik RWTH Aachen

This is a tenure-track professorship for a five-year term leading to a tenure W2 position. For further information about the tenure track process, please visit www.rwth-aachen.de/tenuretrack.

For the earliest possible date, we are seeking qualified applicants for teaching and research in the area of magnetic nanotechnology in medicine. Applicants are expected to conduct research on novel magnetic nanomodified hybrid materials and hybrid implants for clinical application in the areas of magnet-based imaging and magnetically guided therapies with drug release and/or hyperthermia. Knowledge and prior work in the development of highly scalable, biocompatible nanomodified hybrid implants with potential for clinical translation is desired, as is experience in the fabrication of magnetic nanomaterials with targeted design using automated technologies. In addition to experience with magnet-based imaging modalities including the novel Magnetic Particle Imaging for determining material behavior in vivo, novel theranostic concepts using nanomodified hybrid materials and implants for magnetically actuated treatment of tumors or cardiovascular disease are essential. Applicants should be proficient in the development and application of analytical methods, in particular for the characterization of magnetic nanomaterials for medicine and, based on this, derive application-specific physical models with which measurement results can be used in diagnostics and therapy. The research foci and growth areas should be integrated into the interdisciplinary profile area of Medical Science & Technology at RWTH Aachen University, especially in the fields of “Nanobiomedicine” and “Biobionic Medical Systems” as well as in the overall goal of translation into clinical applications. Active participation in projects of the Excellence Strategy is expected.

Interdisciplinary scientific co-operation with other departments and clinics of the Medical School, with the research areas of the RWTH Aachen University including SFB TRR 219, SFB 1382, KFO 344, KFO 5011, FOR 2591, IRTG 2150, GRK 2375, GRK 2415, GRK 2610, PAK 961, CO47CD, JARA, IZKF AACHEN, with the Institute of Biomedical Technologies (IBMT) and with other technical disciplines are encouraged. In addition, an active commitment in the new medical student’s curriculum of the Medical Faculty (“Modellstudieneng Medizin Aachen”) and the master program “Biomedical Engineering” is expected.

The requirements include a doctoral degree and additional research experience, such as a habilitation (post-doctoral lecturing qualification) or equivalent achievements gained as a university researcher or professor or in a research position outside academia. Teaching ability and dedication are essential and the application should include proof of this. Fluent German is not required to start the position but the successful candidate will be expected to hold classes in German within the first 5 years.