Neutrons for spin liquids and functional materials in the FIT program

The Helmholtz Program "Future Information Technologies" (FIT) aims to perform basic research in topics relevant to new concepts for faster and more energy efficient computing and data storage in the medium to long-term future. Research areas include spin liquids whose topologically protected quantum states may provide stable qubits for quantum computers, unconventional superconductors, which hold promise for lossless electrical transport and multifunctional states which are relevant to data storage and switching. In this talk I will give some examples from different areas within the FIT program and then focus on the experimental search and identification of spin liquid states in quantum magnets.