X-rays and Magnetism – A Perfect Match

Today’s fundamental and applied magnetism research is particularly focused on magnetic materials that are suitable as magnetic sensors, or magnetic devices like e.g. spin transistors or magnetic storage media that often consist of complex magnetic structures. Scientific investigations in this area are concerned with the origin of magnetic coupling across interfaces or the magnetic properties of novel magnetic materials which evolve when different kind of magnetic systems are brought into contact. In my talk I will present some examples that show how we have obtained a much better understanding of such devices in recent years using synchrotron radiation, which provides access to the individual magnetic properties of different elements in a sample on the nanometer scale.