Frustration, chirality, multiferroism

Virginie Simonet
Institut Néel, CNRS and University Grenoble Alpes, 38042 Grenoble, France,
virginie.simonet@neel.cnrs.fr

In this talk, I will recall some basic concepts of magnetic frustration that can lead to unconventional behaviours and phases such as spin liquid, spin ices but also complex magnetic orders. These, associated to charge and lattice degrees of freedom, can lead to multiferroism, that is to say the coexistence of at least two ferroic orders in the same material. Important issues in this field are the magnetoelectric effect, the manipulation of magnetic/ferroelectric domains, and the chirality. Some emphasis will be given to this latter fruitful concept, which characterises important magnetic materials beyond the class of multiferroics.