



Contribution ID: 16

Type: **Talk**

[614] Stochastic resonance switching in a spin glass

Wednesday 29 June 2022 18:00 (15 minutes)

Magnetic switching by light remains little understood even after decades of study. Here we present a previously unexplored switching mechanism using X-rays on multiferroic (Ge,Mn)Te. It will be shown that the ferrimagnetic system can be reliably switched using stochastic resonance in XMCD and that the switching mechanism can be stopped by changing one of the two input frequencies. The observed collective switching indicates a spin-glass behaviour, which is supported by μ SR results and further experimental and theoretical characterisation. The possibility to change the resonance conditions will allow to investigate the ultrafast magnetic switching and out of equilibrium magnetic order.

Author: DIL, Hugo (EPFL)

Co-authors: Dr SALMAN, Zaher (PSI); Dr WILFRED, Sunil (New Technologies-Research Center, University of West Bohemia); Dr PIAMONTEZE, Cinthia (PSI); Prof. MINAR, Jan (New Technologies-Research Center, University of West Bohemia); Prof. SPRINGHOLZ, Gunther (Johannes Kepler Universität); Dr KREMPASKY, Juraj (PSI)

Presenter: DIL, Hugo (EPFL)

Session Classification: Nonequilibrium properties of quantum materials

Track Classification: Nonequilibrium properties of quantum materials