

On-line SPICE-SPIN+X Seminars



Wednesday, 17th February 2021, 15:00 (German Time)

The seminar will be via Zoom ([Meeting ID: 882 2266 1271](#)) and live streamed in the SPICE YouTube Channel.



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Seeing or listening: magnetoelastic effects in antiferromagnetic textures

Antiferromagnets are considered as prospective materials for spintronic applications as they could be effectively manipulated with the electrical and optical pulses, and also show magnetic dynamics and low susceptibility to the external magnetic field. The mechanisms involved into control and manipulation of antiferromagnetic states were usually related with the current- or laser-induced spin-torques. However, recent experiments demonstrated that heating and heat-induced strains that follow current and laser pulses can produce similar or even stronger effects on the magnetic dynamics. In this presentation we consider behaviour of antiferromagnetic textures in presence of inhomogeneous strain fields of different origin. In particular, we discuss the magnetoelastic mechanism that is responsible for formation of the domain structure, magnetoelastic pinning of the domain walls, and thermo-magnetoelastic mechanism of current-induced switching.