

# **Non-reciprocity of surface acoustic waves via magneto-rotation coupling**

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Surface acoustic waves (SAWs) are accompanied by rotations of individual mass points near the surface. There is a locking between the sense of rotation and the direction of propagation, through which asymmetry between left-handed and right-handed rotations may induce SAW non-reciprocity. Contact with a magnet induces such an asymmetry by a variety of coupling mechanisms. In this talk, I review recent experimental observations of the magnet-induced SAW non-reciprocity for Ni and CoFeB thin films. The latter shows a much greater non-reciprocity and I attribute it to a known, hereto unobserved coupling mechanism, which we call magneto-rotation coupling.