Contribution ID: **223** Type: **Oral**

Domain wall motion in ferromagnets with nonuniform Dzyaloshinskii-Moriya interaction

Abstract Content

We consider statics and dynamics of domain walls in one-dimensional ferromagnets with functionally-graded Dzyaloshinskii-Moriya interaction. We show that domain wall static solutions in cases of different relations between Dzyaloshinskii-Moriya interaction type and anisotropy axis directions are represented by one of the pendulum equations: with the parametric pumping or external force. We report domain wall drift in the second case and absence of drift in the first one. An analytical model of drift motion is built using collective variables method. The theoretical predictions are confirmed by spin-lattice simulations.

Type ob Book of Abstracts

Paperback

Contact Phone

Primary authors: Mr KHROMETS, Bohdan (Taras Shevchenko National University of Kyiv); Dr PYLYPOVSKYI, Oleksandr (Taras Shevchenko National University of Kyiv); Prof. SHEKA, Denis (Taras Shevchenko National University of Kyiv)

Presenter: Mr KHROMETS, Bohdan (Taras Shevchenko National University of Kyiv)

Session Classification: Magnetism and Superconductivity

Track Classification: Magnetism and Superconductivity