



Contribution ID: 406

Type: Oral

Influence of Model Parameters on Magnetic Moment Reversal in SFS Structure

In the superconductor/ferromagnet/superconductor (SFS) Josephson junctions, the spin-orbit interaction in a ferromagnet without inversion symmetry provides a mechanism for a direct coupling between the magnetic moment and the superconducting current [1]. Possibility to manipulate the magnetic properties by Josephson current and opposite, make an influence on Josephson current by magnetic moment, attracts much attention today [1–5]. We study numerically the dynamics of magnetization in SFS structure taking into account additional signal in the form of current pulse. Magnetization dynamics described by Landau-Lifshitz-Gilbert equation is investigated. Time dependence of magnetization is calculated for different values of the magnetic system and signal parameters. Magnetic moment reversal is demonstrated at some values of model parameters.

Primary author: Ms MIKHAILOVA, Margarita (Dubna State University)

Presenter: Ms MIKHAILOVA, Margarita (Dubna State University)

Track Classification: Applied Research