Contribution ID: **150** Type: **Oral**

SIMULATION OF 3D SPIN CHAINS WITH GEOMETRY-DRIVEN ANISOTROPY

We develop a C-code based spin-lattice simulator SLaSi for magnetization dynamics in ferro- and antiferromagnets. It solves discrete dynamical Landau-Lifshitz-Gilbert equations taking into account exchange and coordinate-dependent anisotropy defined in terms of local discrete Frenet-Serret reference frame calculated on fly. Runge-Kutta-Fehlberg integration scheme of 4-5 order is used for description of time evolution. A user-friendly interface for sample and integrator parameters is developed.

Primary author: TOMILO, Artem (Taras Shevchenko National University of Kyiv)

Co-authors: Dr PYLYPOVSKYI, Oleksandr (Taras Shevchenko National University of Kyiv); Dr YERSHOV, Kostiantyn (Bogolyubov Institute for Theoretical Physics); Prof. SHEKA, Denis (Taras Shevchenko National University of Kyiv)

Presenter: TOMILO, Artem (Taras Shevchenko National University of Kyiv)

Track Classification: Computer Engineering