

**New results in the study of magnetic curves in
quasi-Sasakian manifolds of product type**

Ana Irina Nistor

"Gheorghe Asachi" Technical University of Iasi

ana.irina.nistor@gmail.com

This presentation is based on the joint paper with M.I. Munteanu entitled "Magnetic curves in quasi-Sasakian manifolds of product type" which was accepted for publication in "New Horizons in Differential Geometry and its Related Fields", Eds. T. Adachi and H. Hashimoto, 2021.

The main result represents a positive answer to sustain our conjecture about the order of a magnetic curve in a quasi-Sasakian manifold. More precisely, we show that the magnetic curves in quasi-Sasakian manifolds, obtained as the product of a Sasakian and a Kähler manifold, have maximum order 5.

Next, we study the magnetic curves in $\mathbb{S}^3 \times \mathbb{S}^2$. First, we find the explicit parametrizations of such curves. Then, we find a necessary and sufficient condition for a magnetic curve in $\mathbb{S}^3 \times \mathbb{S}^2$ to be periodic. Finally, we conclude with some examples of magnetic curves in $\mathbb{S}^3 \times \mathbb{S}^2$.