YEDİTEPE UNIVERSITY

MATHEMATICS DEPARTMENT SEMINARS

Minimal surfaces and smooth autonomous dynamical systems in $2D$

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Abstract: In this talk, an autonomous dynamical system on a two-dimensional manifold M will be identified with an exterior differential system $(\Sigma, \mathcal{I})$, where Σ is a three-dimensional Riemannian manifold in $\mathbb{R} \times TM \simeq J^1(\mathbb{R}, M)$ and $\mathcal{I}$ is the Pfaffian system generated by the contact forms on Σ. We will show that it is possible to construct a minimal but not necessarily totally geodesic surface in Σ characterized by the corresponding dynamical system. As a particular case, a nontrivial minimal surface in the Heisenberg group will be discussed.

Date: Friday, April 17, 2020

Time: 13:00

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