

TEMPLE UNIVERSITY

Department of Mathematics

Analysis Seminar

Zoom meeting

Monday, April 12 2021, 2:30 p.m.

*Global hypoellipticity of sums of squares on
compact manifolds*

by Gabriel Araujo

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Abstract: In a recent work with Igor A. Ferra (Federal Univ. of ABC - Brazil) and Luis F. Rognette (Federal Univ. of Sao Carlos - Brazil) we investigate necessary and sufficient conditions for global hypoellipticity of certain sums of squares of vector fields. Our model is inspired by a rather general one introduced by (Barostichi-Ferra-Petronilho, 2017) when the ambient manifold is a torus; here we extend their results to more general closed manifolds, which requires a new interpretation of their Diophantine conditions (as these are not available in our framework).