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Global solvability of real analytic involutive systems on compact manifolds. II. (English)

Zbl 1418.35002

Trans. Am. Math. Soc. 371, No. 7, 5157-5178 (2019).

The authors continue their previous study [Math. Ann. 369, No. 3–4, 1177–1209 (2017; Zbl 1380.35129)] on the global solvability of a locally integrable structure of tube type and a corank one, considering a linear partial differential operator \mathbb{L} associated with a real analytic closed 1-form defined on a real analytic closed n -manifold. The authors characterize the global hypoellipticity of \mathbb{L} and the global solvability of \mathbb{L}^{n-1} .

Reviewer: Marius Ghergu (Dublin)

MSC:

35A01 Existence problems for PDEs: global existence, local existence, non-existence

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35N10 Overdetermined systems of PDEs with variable coefficients

58J10 Differential complexes

Keywords:

locally integrable structure; complex vector fields; Liouville numbers

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