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Real-analytic solvability for differential complexes associated to locally integrable structures

Inspired by the work of Suzuki (1972) on the concept of real-analytic solvability for first-order analytic linear partial differential operators we extend his results for the differential complexes associated to analytic locally integrable structures of corank one. We prove that such notion of solvability is related to the smooth solvability condition introduced by Treves (1983). In our arguments the natural extension to closed forms of the well-known Baouendi-Treves approximation formula, the so-called “Approximate Poincaré Lemma” plays a key role. Joint work with Paulo D. Cordaro.