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Hessian measures on the Heisenberg group. (English) Zbl 1282.26016
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In the context of the Heisenberg group, several notions of convexity have been presented by various researchers. Several authors, simultaneously, presented the notion of convexity, e.g. *N. S. Trudinger* and *X.-J. Wang* [*Topol. Methods Nonlinear Anal.* 10, No. 2, 225–239 (1997; [Zbl 0915.35039](#))]. In the present paper, the authors study the properties of k -convex functions on the Heisenberg group and prove the weak continuity of the k -Hessian measure in the Euclidean space corresponding to the case that appears in [loc. cit.]. Resolving the Garofalo-Tournier conjecture, the monotonicity formula is proved in Section 3 for cases $n > 2$.

Reviewer: [Deshna Loonker \(Jodhpur\)](#)

MSC:

- [26B25](#) Convexity of real functions of several variables, generalizations
- [28A33](#) Spaces of measures, convergence of measures
- [35J60](#) Nonlinear elliptic equations
- [35R03](#) PDEs on Heisenberg groups, Lie groups, Carnot groups, etc.

Cited in 4 Documents

Keywords:

[Hessian measures](#); [Heisenberg group](#); [monotonicity formula](#)

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