

## DIFFERENTIAL INVARIANCE OF THE MULTIPLICITY OF REAL AND COMPLEX ANALYTIC SETS

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**Abstract:** This paper is devoted to proving the differential invariance of the multiplicity of real and complex analytic sets. In particular, we prove the real version of the Gau–Lipman theorem, i.e., it is proved that the multiplicity mod 2 of real analytic sets is a differential invariant. We also prove a generalization of the Gau–Lipman theorem.

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**Key words:** Zariski’s multiplicity conjecture, analytic sets, multiplicity.