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Title: Bernstein type theorems for minimal surfaces in (α, β)-space

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Let $\mathbb{V}^{n+1}$ be an $(n+1)$-dimensional real vector space and $\tilde{F} = \tilde{\alpha}\phi(s)$, $s = \tilde{\beta}/\tilde{\alpha}$, be an (α, β)-metric, where $\tilde{\alpha}$ is an Euclidean metric and $\tilde{\beta}$ is a one form. Minimal surfaces with respect to the Busemann–Hausdorff measure and the Holmes–Thompson measure are called BH-minimal and HT-minimal surfaces, respectively. We give a Bernstein type theorem for minimal graphs in $(\mathbb{V}^{n+1}, \tilde{F})$ with $n \leq 7$. Let $\tilde{F}_b = \tilde{\alpha}\phi(s)$, $s = \tilde{\beta}/\tilde{\alpha}$, be a Minkowski metric with $b := \|\tilde{\beta}\|_{\tilde{\alpha}}$. We use a PDE to characterize the BH-minimal and HT-minimal graph over any hyperplane containing the origin in $(\mathbb{V}^{n+1}, \tilde{F}_b)$. Then we prove that this PDE is an elliptic equation of mean curvature type when $b \in [0, \epsilon)$ for some constant $\epsilon > 0$ and give a Bernstein type theorem for BH-minimal surface in $(\mathbb{V}^3, \tilde{F}_b)$. BH-minimal cones with an isolated singularity at the origin are also given.

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