

Flatness results for nonlocal minimal cones and subgraphs

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Abstract. We show that nonlocal minimal cones which are non-singular subgraphs outside the origin are necessarily halfspaces.

The proof is based on classical ideas of [14] and on the computation of the linearized nonlocal mean curvature operator, which is proved to satisfy a suitable maximum principle.

With this, we obtain new, and somehow simpler, proofs of the Bernstein-type results for nonlocal minimal surfaces which have been recently established in [20]. In addition, we establish a new nonlocal Bernstein-Moser-type result which classifies Lipschitz nonlocal minimal subgraphs outside a ball.

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