# The Monge-Ampere system in dimension two is fully flexible in codimension two

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We prove that every $\mathcal{C}^1(\bar{\omega})$-regular subsolution of the Monge-Ampere system posed on a 2-dimensional domain $\omega$ and with target codimension 2, can be uniformly approximated by its exact solutions with regularity $\mathcal{C}^{1,\alpha}(\bar{\omega})$ for any $\alpha < 1$. This result asserts flexibility of Poznyak's theorem for isometric immersions of 2d Riemannian manifolds into $\mathbb{R}^4$, in the parallel setting of the Monge-Ampère system.

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