Title: Classification of minimal Lorentz surfaces in indefinite space forms with arbitrary codimension and arbitrary index

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Since J. L. LAGRANGE initiated in [18] the study of minimal surfaces of Euclidean 3-space in 1760, minimal surfaces in real space forms have been studied extensively by many mathematicians during the last two and half centuries. In contrast, so far very few results on minimal Lorentz surfaces in indefinite space forms are known. Hence, in this paper we investigate minimal Lorentz surfaces in arbitrary indefinite space forms. As a consequence, we obtain several classification results for minimal Lorentz surfaces in indefinite space forms. In particular, we completely classify all minimal Lorentz surfaces in a pseudo-Euclidean space $\mathbb{E}_s^m$ with arbitrary dimension m and arbitrary index s.

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