MINIMAL SURFACES IN THE PRODUCT OF 2-MANIFOLDS

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In this talk we first introduce a Kähler structure on the product $\Sigma_1 \times \Sigma_2$, where (Σ_1, g_1) and (Σ_2, g_2) are pseudo-Riemannian two manifolds and the Kähler metric is of neutral signature. Then, we discuss the surface theory in $\Sigma_1 \times \Sigma_2$ and in particular, we show a classification result about Lagrangian surfaces with parallel mean curvature. Finally, we present some recent results on minimal surfaces in $\Sigma \times \Sigma$, where Σ is a two dimensional real space form.

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