

1134-32-217

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Forelli type theorem for harmonic map. Preliminary report.

In this presentation, I will talk about a joint work with Jie Luo on Forelli type theorem for a map f from the unit ball B_n in \mathbb{C}^n to a Riemannian manifold. It is well that if function $f : B_n \rightarrow \mathbb{R}$ is C^∞ near $z = 0$ and $f_z(\lambda) = f(\lambda z)$ is harmonic in the unit disc $D(0, 1)$ for all $z \in B_n$ then f is pluriharmonic in B_n . A question was asked by Ohsawa. Is the Forelli theorem true if one replaces the target manifold \mathbb{R} by a Riemannian manifold. The talk will present our results for this problem of Ohsawa. (Received September 05, 2017)