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**Jean Pierre Mutanguha\*** (jpmutang@uark.edu). *Hyperbolic Immersions of Free Groups.*

We proved that the mapping torus of a graph immersion is word-hyperbolic if and only if it has no Baumslag-Solitar subgroups. In this talk, we will illustrate how pullbacks can be used to prove hyperbolicity of such mapping tori. (Received January 25, 2019)