Properly embedded minimal annuli in $\mathbb{H}^2 \times \mathbb{R}$

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Abstract

Consider pairs of Jordan curves in the ideal boundary of $\mathbb{H}^2 \times \mathbb{R}$ which are vertical graphs. We prove existence and non-existence results for properly embedded minimal annuli bounded by pairs of curves of this kind. On the way to obtain the existence theorems, we are able to set conditions on the boundary curves of such minimal annuli to ensure compactness theorems. This is joint work with L. Ferrer, R. Mazzeo and M. Rodriguez.