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# Translating solitons on solvmanifolds

In this talk we consider the family of manifolds $(\mathbb{R}^3, g)$ where

$$g=e^{-2\lambda_1z}dx^2 + e^{-2\lambda_2z}dy^2 + dz^2.$$

Note that if $\lambda_1=\lambda_2=0$ then this is regular euclidean space, while for $\lambda_1=\lambda_2=1$ it represents hyperbolic space. The case $\lamba_1=-\lambda_2=1$ has been also considered by G. Pipoli in [Invariant translators of the solvable group, Annali di Matematica Pura ed Applicata 199, (2020) 1961–1978.]

Following the ideas of Pipoli, we will discuss the construction of certain self-similar solutions to Mean Curvature flow in some other ranges of the parameters.