

On the porous medium equation on negatively curved manifolds

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We consider the porous medium equation in the Riemannian setting, under assumptions that allow for curvature being unbounded below. In particular, the following topic will be discussed:

- 1) Existence and uniqueness of solutions with measure data;
- 2) Long-time behaviour of solutions and its dependence on curvature conditions;
- 3) Large data and optimal growth rate for existence. Blow-up conditions.

This talk is based on joint works with M. Muratori, F. Punzo, J.L. Vázquez.