

INSALATE DI MATEMATICA

presents

22/02/2023

ANDREA BISTERZO

Università degli Studi di Milano-Bicocca

Symmetry of solutions to semilinear PDEs on warped product manifolds



Abstract: In this talk we will see how the stability of a solution to a Dirichlet semilinear problem in a warped product manifold implies the (radial) symmetry of the solution itself. More in detail, we will consider two symmetry results for solutions to $\Delta u = f(u)$. The first one concerns the case in which the (annular) domain has homogeneous leaves, that is, it has a sufficient number of isometries acting transitively on each leaf. The second one deals with the case in which this abundance of isometries may fail, forcing us to use some tools from potential theory.

Keywords: symmetry · PDEs · stability · Riemannian manifolds · parabolicity

Dipartimento di Matematica e Applicazioni
Università degli Studi di Milano-Bicocca

U5-3014
4.00 pm (CET)



"Obvious" is the most dangerous word in mathematics.
(Eric Temple Bell)