

## **Strong minimality and invariant foliations**

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A driving force for the development of model-theory has been the understanding of two classes of structures: o-minimal structures and stable structures. Roughly speaking, stable structures are those which do not interpret any dense linear order at all and among them, the strongly minimal structures are those for which every definable set with one variable is either finite or cofinite.

Starting with an algebraic differential equation, one obtains a stable structure after taking the set of solutions of this differential equation in certain “universal” differential fields called the differentially closed fields. I will explain how to describe such a structure in practice and how this relates to properties of algebraic integrability for the differential equation under study and to the classification of foliations (and webs) admitting a given vector field as an infinitesimal symmetry. I will also present some applications to specific classes of algebraic differential equations.