

A NEW EQUIVALENCE METHOD

Joël Merker

Paris-Saclay University, France
joel.merker@universite-paris-saclay.fr

To upgrade the naive approach through power series expanded at only one point, the talk will show how to import concepts and principles of Élie Cartan's G-structured method of equivalence. Quite unexpectedly, basic linear representation theory happens to become of central use within highly nonlinear jet bundles. Two specific illustrations will be presented: Homogeneous models of 5D PDE systems under fiber-preserving transformations; Affinely homogeneous surfaces S^2 in R^4 .

Joint work with Julien Heyd (Paris-Saclay University).