

**Ewa Stróżyńska**

Faculty of Mathematics and Information Science,  
Warsaw University of Technology.

August 14, 2017

**Normal forms for vector fields with quadratic leading part.**

ABSTRACT

We solve completely the problem of formal classification of vector fields with quadratic leading part using formal changes of coordinates (without changes of time). In the proofs we are able to avoid complicated calculations. The idea of the method is presented in one exemplary case - the vector field with rational first integral and polynomial inverse integrating factor for homogeneous quadratic part of the field.