

# QUASILINEAR SYSTEMS WITH LINEARIZABLE CHARACTERISTIC WEBS

Sergey Agafonov<sup>1</sup>, Eugene Ferapontov<sup>2</sup>

<sup>1</sup> UNESP-Universidade Estadual Paulista, São José do Rio Preto, Brazil

<sup>2</sup> Loughborough University, Loughborough, United Kingdom

## Resumo/Abstract:

We classify quasilinear systems whose characteristic webs are linearizable on every solution. Although the linearizability of an individual 3-web is known to be a highly nontrivial differential constraint living in the eighth differential neighbourhood, the requirement of linearizability of characteristic webs on *all* solutions imposes simple second-order constraints for the characteristic speeds of the system. It is demonstrated that any such system can be transformed to a collection of uncoupled Hopf-type equations by a reciprocal transformation.