

Lie pseudo-groups and geometry of differential equations

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Abstract:

The talk will describe applications of E. Cartan's structure theory of Lie pseudo-groups to geometry of partial differential equations. Examples will include the proof of linearizability of the generalized Hunter-Saxton equation, zero-curvature representations of the r -modified dispersionless Kadomtsev-Petviashvili equation, multi-valued solutions of the Khokhlov-Zabolotskaya equation, and recursion operators for the universal hierarchy equation.