Conservation laws for equations of mixed elliptic-hyperbolic type

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For equations mixed elliptic-hyperbolic type such as the Tricomi equation invariances in the space of solutions with respect to various local groups of transformations is examined. To each invariance property a corresponding conservation law is derivable either via Noether's theorem since the equations are in divergence form or by the method of multipliers. The resulting conservation laws are applied to prove uniqueness theorems and to generate *a priori* estimates for the original equation.

Presented by Kevin R. Payne