

# Critical exponents for equations of mixed elliptic-hyperbolic type

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For semilinear Gellerstedt equations with Tricomi, Goursat or Dirichlet boundary conditions we prove Pohozaev type identities and derive non existence results that exploit an invariance of the linear part with respect to certain non homogeneous dilations. A critical exponent phenomenon of power type in the nonlinearity is exhibited in these mixed elliptic hyperbolic or degenerate settings where the power is one less than the critical exponent in a relevant Sobolev imbedding.

**Presented by Daniela E. Lupo**