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Extremal properties of solutions of special classes of a hyperbolic-type equation. (English. Russian original) [Zbl 1262.35148](#)

Math. Notes 92, No. 4, 490-496 (2012); translation from *Mat. Zametki* 92, No. 4, 533-540 (2012).

Summary: Special classes of solutions of the Cauchy problem for a hyperbolic equation are introduced and local extremum principles for the cases of positive and negative values of the parameter of the equation are established.

MSC:

[35L20](#) Initial-boundary value problems for second-order hyperbolic equations

Cited in **2** Documents

[35B05](#) Oscillation, zeros of solutions, mean value theorems, etc. in context of PDEs

Keywords:

local extremum; Gauss hypergeometric function; extremum principle

Full Text: [DOI](#)

References:

- [1] V. M. Dolgoplov, M. V. Dolgoplov, and I. N. Rodionova, "Construction of special classes of solutions for some differential equations of hyperbolic type," *Dokl. Ross. Akad. Nauk* 429(5), 583–589 (2009) [*Dokl. Math.* 80(3), 860–866 (2009)]. · [Zbl 1180.35330](#)
- [2] H. Bateman and A. Erdélyi, *Higher Transcendental Functions, Vol. 1: The Hypergeometric Function, Legendre Functions* (McGraw-Hill, New York-Toronto-London, 1953; Nauka, Moscow, 1965 and 1973 (2nd ed.)).

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