

**Title:** Positive Solutions of the Dirichlet Problem for the One-dimensional Minkowski-Curvature Equation

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**Source:** Advanced Nonlinear Studies **Volume:** 12 **Issue:** 3 **Pages:** 621-638 **Published:** Aug 2012

**Document Type:** Article

**Language:** English

**Abstract:** We discuss existence and multiplicity of positive solutions of the Dirichlet problem for the quasilinear ordinary differential equation  $-(u' / \sqrt{1 - u'^2})' = f(t, u)$ . Depending on the behaviour of  $f = f(t, s)$  near  $s = 0$ , we prove the existence of either one, or two, or three, or infinitely many positive solutions. In general, the positivity of  $f$  is not required. All results are obtained by reduction to an equivalent non-singular problem to which variational or topological methods apply in a classical fashion.

**Author Keywords:** Quasilinear Ordinary Differential Equation; Minkowski-Curvature; Dirichlet Boundary Conditions; Positive Solution; Existence; Multiplicity; Critical Point Theory; Bifurcation Methods; Lower and Upper Solutions

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**Funding:**

Funding Agency	Grant Number
Fundação para a Ciência e a Tecnologia	SFRH/BD/61484/2009

**Publisher:** Advanced Nonlinear Studies

**Publisher Address:** INC, Po Box 691204, San Antonio, TX 78269 USA

**ISSN:** 1536-1365

**Citation:** Coelho I, Corsato C, Obersnel F, Omari P. Positive Solutions of the Dirichlet Problem for the One-dimensional Minkowski-Curvature Equation. Advanced Nonlinear Studies. 2012; 3 (12): 621-638.