Mikko Parviainen: *Global higher integrability for parabolic quasiminimizers in nonsmooth domains*; Helsinki University of Technology, Institute of Mathematics, Research Reports A499 (2006).

Abstract: *We study the global higher integrability of the gradient of a parabolic quasiminimizer with quadratic growth conditions. Our objective is to show that the gradient belongs to a higher Sobolev space than assumed a priori if the lateral boundary satisfies a capacity density condition and boundary values are smooth enough. We derive estimates near the lateral and the initial boundary.*

AMS subject classifications: Primary: 35K60; Secondary: 35K15, 35K55, 49N60

Keywords: nonlinear parabolic system, heat equation, capacity density, initial value problem, reverse Hölder inequality

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