

M. Křepela

**Convolution inequalities in weighted
Lorentz spaces**

MATH-KMA-2013/414

February 2013

Submitted

Cover print by Reprostředisko, Malostranské nám. 25, Praha 1 - Malá Strana
Design by Mirko Rokyta, picture of snowflake by Ondřej Kalenda
Current series administrators: Stanislav Hencl, Ondřej Kalenda

List of preprints released in this series

All preprints available on <http://www.karlin.mff.cuni.cz/kma-preprints/>
E-mail contact to series administrator: kma-prep@karlin.mff.cuni.cz

1999 – 2011

For the details on papers submitted in specified years see the web page of the preprint series.

2012

- MATH-KMA-2012/383 Robert Černý and Petr Gurka: *Moser-type inequalities for generalized Lorentz-Sobolev spaces*
- MATH-KMA-2012/384 Robert Černý: *Sharp constants for Moser-type inequalities concerning embedding into Zygmund spaces*
- MATH-KMA-2012/385 T. Bárta: *Global existence for a system of nonlocal PDEs with applications to chemically reacting incompressible fluids*
- MATH-KMA-2012/386 T. Bárta: *Nonmonotone nonconvolution functions of positive type and applications*
- MATH-KMA-2012/387 T. Bárta: *Global existence for a nonlinear model of 1D chemically reacting viscoelastic body*
- MATH-KMA-2012/388 Václav Vlasák: *The size of the classes of H^n -sets*
- MATH-KMA-2012/389 Martin Rmoutil: *On the nonexistence of a relation between σ -left-porosity and σ -right-porosity*
- MATH-KMA-2012/390 Dalibor Pračák, Josef abenský: *On the dimension of the attractor for a modified 3d Ladyzhenskaya model*
- MATH-KMA-2012/391 O.Kalenda and J.Spurný: *Quantification of the reciprocal Dunford-Pettis property*
- MATH-KMA-2012/392 P. Honzík: *Maximal Marcinkiewicz multipliers*
- MATH-KMA-2012/393 F. Cobos, A. Gogatishvili, B. Opic and L. Pick: *Interpolation of uniformly absolutely continuous operators*
- MATH-KMA-2012/394 E. Pernecká and L. Pick: *Compactness of Hardy operators involving suprema*
- MATH-KMA-2012/395 C.S.Barroso, O.Kalenda and M.P.Reboucas: *Optimal approximate fixed point results in locally convex spaces*
- MATH-KMA-2012/396 Martin Franců, Ronald Kerman, Colin Phipps, Ali Sayfy: *Finite element approximations to rearrangements*
- MATH-KMA-2012/397 Michal Kraus: *Coarse and uniform embeddings between Orlicz sequence spaces*
- MATH-KMA-2012/398 O. Kurka: *On the variation of the Hardy-Littlewood maximal function*
- MATH-KMA-2012/399 Gilles Lancien and Eva Pernecká: *Approximation properties and Schauder decompositions in Lipschitz-free spaces*
- MATH-KMA-2012/400 L. Veselý and L. Zajíček: *On differentiability of convex operators*
- MATH-KMA-2012/401 J. Duda and L. Zajíček: *Curves in Banach spaces which allow a C^1, BV parametrization or a parametrization with finite convexity*
- MATH-KMA-2012/402 L. Zajíček: *Hadamard differentiability via Gateaux differentiability*
- MATH-KMA-2012/403 David E. Edmunds and Bohumír Opic: *A limiting variant of Krasnoselkii compact interpolation theorem*
- MATH-KMA-2012/404 S. Hencl, L. Kleprlík and J. Malý: *Composition operator and Sobolev-Lorentz spaces $WL^{n,q}$*
- MATH-KMA-2012/405 L. Zajíček: *Gateaux and Hadamard differentiability via directional differentiability*
- MATH-KMA-2012/406 Robert Černý: *Generalized n -Laplacian: boundedness of the weak solutions to the Dirichlet problem with the nonlinearity in the critical growth range*
- MATH-KMA-2012/407 Kristýna Kuncová and Jan Malý: *Non-absolutely convergent integrals in metric spaces*
- MATH-KMA-2012/408 Luigi Dónofrio, Stanislav Hencl and Roberta Schiattarella: *Bi-Sobolev homeomorphism with zero Jacobian almost everywhere*
- MATH-KMA-2012/409 Petr Honzík and Jan Malý: *Non-absolutely convergent integrals and singular integrals*
- MATH-KMA-2012/410 Maurizio Grasselli and Dalibor Pračák: *Regularity results for a Cahn-Hilliard-Navier-Stokes system with shear dependent viscosity*

2013

- MATH-KMA-2013/411 S. Hencl and P. Honzik: *Dimension of images of subspaces under mappings in Triebel-Lizorkin spaces*
- MATH-KMA-2013/412 Marek Cúth: *Noncommutative Valdivia compacta*
- MATH-KMA-2013/413 Luděk Zajíček: *A Lipschitz function which is C^∞ on a.e. line need not be generically differentiable*
- MATH-KMA-2013/414 M. Křepela: *Convolution inequalities in weighted Lorentz spaces*