

Marek Cúth, Ondřej Kalenda and Petr Kaplický

**Isometric representation of Lipschitz-free
spaces over convex domains
in finite-dimensional spaces**

MATH-KMA-2016/529

October 2016

Submitted

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 – 2014

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

2015

- MATH-KMA-2015/482 Filip Soudský: *Note on linearity of rearrangement-invariant function spaces*
- MATH-KMA-2015/483 R. Černý: *New results concerning Moser-type inequalities in Lorentz-Sobolev spaces*
- MATH-KMA-2015/484 R. Černý: *On the weak continuity of the Moser functional in Lorentz-Sobolev spaces*
- MATH-KMA-2015/485 Tomáš Roskovec: *Construction of $W^{2,n}(\Omega)$ function with gradient violating Lusin (N) condition*
- MATH-KMA-2015/486 Ondřej Kalenda and Jiří Spurný: *Preserving affine Baire classes by perfect affine maps*
- MATH-KMA-2015/487 Martin Křepela: *Bilinear weighted Hardy inequality for nonincreasing functions*
- MATH-KMA-2015/488 Martin Křepela: *Iterating bilinear Hardy inequalities*
- MATH-KMA-2015/489 S. Hencl, A. Pratelli: *Diffeomorphic approximation of $W^{1,1}$ planar Sobolev homeomorphisms*
- MATH-KMA-2015/490 V. Krytoř, L. Zajíček: *Differences of two semiconvex functions on the real line*
- MATH-KMA-2015/491 Dalibor Pračák, Jakub Slavík: *Attractors and entropy bounds for a nonlinear RDEs with distributed delay in unbounded domains*
- MATH-KMA-2015/492 Ondřej Kurka: *Amalgamations of classes of Banach spaces with a monotone basis*
- MATH-KMA-2015/493 M. Bohata, J. Hamhalter and O. Kalenda: *On Markushevich bases in preduals of von Neumann algebras*
- MATH-KMA-2015/494 Vít Musil: *Optimal Orlicz domains in Sobolev embeddings into Marcinkiewicz spaces*
- MATH-KMA-2015/495 S. Hencl and V. Tengvall: *Sharpness of the differentiability almost everywhere and capacity estimates for Sobolev mappings*
- MATH-KMA-2015/496 Luigi D'onofrio, Stanislav Hencl, Jan Malý and Roberta Schiattarella: *Note on Lusin (N) condition and the distributional determinant*
- MATH-KMA-2015/497 Ondřej Kurka: *Zippin's embedding theorem and amalgamations of classes of Banach spaces*
- MATH-KMA-2015/498 Ondřej Kurka: *Non-universal families of separable Banach spaces*
- MATH-KMA-2015/499 Zhuomin Liu and Jan Malý: *A strictly convex Sobolev function with null Hessian minors*
- MATH-KMA-2015/500 Marek Cúth, Michal Doucha, Przemysław Wojtaszczyk: *On the structure of Lipschitz-free spaces*
- MATH-KMA-2015/501 Marek Cúth: *Separable determination of (generalized-)lushness*
- MATH-KMA-2015/502 Loukas Grafakos, Danqing He, Petr Honzík: *Rough Bilinear Singular Integrals*
- MATH-KMA-2015/503 Martin Křepela: *Integral conditions for Hardy-type operators involving suprema*
- MATH-KMA-2015/504 M. Bohata, J. Hamhalter and O. Kalenda: *Decompositions of preduals of JBW and JBW* algebras*
- MATH-KMA-2015/505 Jindřich Lechner: *1-Grothendieck $C(K)$ spaces*
- MATH-KMA-2015/506 Daniel Campbell: *Diffeomorphic approximation of Planar Sobolev Homeomorphisms in Orlicz-Sobolev spaces*
- MATH-KMA-2015/507 T. Bárta: *Rate of convergence to equilibrium and Łojasiewicz-type estimates*
- MATH-KMA-2015/508 Andrea Cianchi, Lubo Pick and Lenka Slavíková: *Banach algebras of weakly differentiable functions*
- MATH-KMA-2015/509 Paola Cavaliere, Andrea Cianchi, Lubo Pick and Lenka Slavíková: *Norms supporting the Lebesgue differentiation theorem*

2016

- MATH-KMA-2016/510 Amiran Gogatishvili, Martin Křepela, Luboš Pick and Filip Soudský: *Embeddings of Lorentz-type spaces involving weighted integral means*
- MATH-KMA-2016/511 Martin Křepela: *Boundedness of Hardy-type operators with a kernel: integral weighted conditions for the case $0 < q < 1 \leq p < \infty$*
- MATH-KMA-2016/512 Martin Křepela: *Convolution inequalities in weighted Lorentz spaces: case $0 < q < 1$*
- MATH-KMA-2016/513 O. Kalenda: *On projectional skeletons in Vaák spaces*
- MATH-KMA-2016/514 Marek Cúth: *Separable determination in Asplund spaces*
- MATH-KMA-2016/515 Miloslav Holík: *Reduction theorems for Sobolev embeddings into the spaces of Holder, Morrey and Campanato type*
- MATH-KMA-2016/516 Eva Buriánková, David E. Edmunds and Luboš Pick: *Optimal function spaces for the Laplace transform*
- MATH-KMA-2016/517 Dalibor Pražák, Kumbakonam R. Rajagopal, Jakub Slavík: *A non-standard approach to a constrained forced oscillator*
- MATH-KMA-2016/518 T. Bárta: *Decay estimates for solutions of an abstract wave equation with general damping function*
- MATH-KMA-2016/519 Marek Cúth, Marián Fabián: *Rich families and projectional skeletons in Asplund WCG spaces*
- MATH-KMA-2016/520 Marek Cúth, Michal Johaniš: *embedding of ℓ_1 into Lipschitz-free spaces and ℓ_∞ into their duals*
- MATH-KMA-2016/521 Zhuomin Liu and Jan Malý: *A note on Sobolev isometric immersions below $W^{2,2}$ regularity*
- MATH-KMA-2016/522 D. Campbell, S. Hencl and V. Tengvall: *Approximation of $W^{1,p}$ Sobolev homeomorphism by diffeomorphisms and the signs of the Jacobian*
- MATH-KMA-2016/523 J. Rataj and L. Zajíček: *On the structure of sets with positive reach*
- MATH-KMA-2016/524 L. Grafakos, D. He, P. Honzik and H. V. Nguyen: *The Hormander multiplier theorem I: the linear case revisited*
- MATH-KMA-2016/525 L. Grafakos, D. He and P. Honzik: *The Hormander multiplier theorem II: the bilinear local L_2 case*
- MATH-KMA-2016/526 Vendula Honzlová Exnerová, Jan Malý and Olli Martio: *Modulus in Banach Function Spaces*
- MATH-KMA-2016/527 M. Bohata, J. Hamhalter, O.F.K. Kalenda, A.M. Peralta and H.Pfítzner: *Preduals of JBW^* -triples are 1-Plichko spaces*
- MATH-KMA-2016/528 Martin Michálek, Dalibor Pražák, Jakub Slavík: *Semilinear damped wave equation in locally uniform spaces*
- MATH-KMA-2016/529 Marek Cúth, Ondřej Kalenda and Petr Kaplický: *Isometric representation of Lipschitz-free spaces over convex domains in finite-dimensional spaces*