Dušan Pokorný

The approximate and the Clarke subdifferentials can be different everywhere

Preprint No. MATH-KMA-2006/214

December 2006

Submitted to *Journal of Mathematical Analysis and Applications*

Department of Mathematical Analysis, Faculty of Mathematics and Physics,
Charles University, Sokolovská 83, 186 75 Praha 8, Czech Republic

http://www.karlin.mff.cuni.cz/kma-preprints/

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

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 – 2005

For the details on the 188 papers submitted in years 1999-2005 see the web page of the preprint series.

2006

[MATH-KMA 2006/189] Jaroslav Lukeš, Tomáš Mocek, Ivan Netuka: *Exposed sets in potential theory.*

[MATH-KMA 2006/190] Ondřej Kalenda: *A converse to Amir-Lindenstrauss theorem in complex Banach spaces.*

[MATH-KMA 2006/191] Ondřej Kalenda: *(I)-envelopes of closed convex sets in Banach spaces.*

[MATH-KMA 2006/192] Petr Kaplický, Dalibor Pražák: *Lyapunov exponents and the dimension of the attractor for 2d shear-thinning incompressible flow.*

[MATH-KMA 2006/193] Robert Černý: *Local monotonicity of measures supported by real analytic curves.*

[MATH-KMA 2006/194] Robert Černý, Jan Kolář: *Monotone measures with bad tangential behaviour in the plane.*

[MATH-KMA 2006/195] Jakub Duda, Luděk Zajíček: *Curves in Banach spaces which allow a C^2 parametrization or a parametrization with finite convexity.*

[MATH-KMA 2006/196] Ondřej Kalenda: *Baire-one mappings contained in a usco map.*

[MATH-KMA 2006/197] Roumen Anguelov, Ondřej Kalenda: *The convergence space of minimal usco mappings.*

[MATH-KMA 2006/198] Dalibor Pražák: *On the dynamics of equations with infinite delay.*

[MATH-KMA 2006/199] Jiří Spurný: *An example of a strongly affine Baire-two function on a simplex.*

[MATH-KMA 2006/200] Michal Johanis, Jan Rychtář: *On uniformly Gâteaux smooth norms and normal structure.*

[MATH-KMA 2006/201] Miroslav Zelený: *The Denjoy-Clarkson property with respect to Hausdorff measures for the gradient mapping of functions of several variables.*

[MATH-KMA 2006/202] Ondřej Kalenda: *(I)-envelopes of unit balls and James' characterization of reflexivity.*

[MATH-KMA 2006/203] Luděk Zajíček: *Differentiability of approxiamtely convex, semiconcave and strongly paraconvex functions.*

[MATH-KMA 2006/204] Nguyen Duc Huy, Jana Stará: *Fluids with pressure dependent viscosity: parial regularity of steady flows up to the boundary.*

[MATH-KMA 2006/205] Jakub Duda, Olga Maleva: *Metric derived numbers and continuous metric differentiability via homeomorphisms.*

[MATH-KMA 2006/206] Petr Holický: *Borel sets with σ-compact sections for nonseparable spaces.*

[MATH-KMA 2006/207] Marianna Csörnyei, Petr Holický: *Darboux property of Gâteaux derivatives of functions on $\mathbb{R}^n$.*

[MATH-KMA 2006/208] Stanislav Hencl: *Bilipschitz mappings with derivative of bounded variation.*

[MATH-KMA 2006/209] Luděk Zajíček: *On Lipschitz and d.c. surfaces of finite codimension in a Banach space.*

[MATH-KMA 2006/210] Miroslav Bačák: *Uniquie decomposition property and extreme points.*

[MATH-KMA 2006/211] Dalibor Pražák: *Fourier series and the Colombeau algebra on the torus.*

[MATH-KMA 2006/212] Aleš Nekvinda, Luboš Pick: *Optimal estimates for the Hardy averaging operator.*

[MATH-KMA 2006/213] Dušan Pokorný: *On Lusin's (N)-property of the sum of two functions.*

[MATH-KMA 2006/214] Dušan Pokorný: *The approximate and the Clarke subdifferentials can be different everywhere.*