

$E(e^{iY_j}) \leq \exp(8(M(\kappa)^2+1)\frac{N}{n}\chi_2)$
 $\|a\|_\phi = \sup_{r \in \mathbb{Z}} \phi(|r|)^{-1} |a_r|$
 $m_1x_1+m_2x_2+\dots+m_qx_q \notin B$
 $|U| \leq c_k \left| \frac{p_f}{\phi_H} \right| \sum_{i \in H} z_i^i w^{m-i}$
 $\|G \star G - \mu \star \mu\|_1 \leq 2p^2 + \frac{\eta}{3}$
 $\|f\|_2^2 = \sum_{|m| \in \mathbb{Z}} d_m \operatorname{tr} [\hat{f}(m) \star \hat{f}(m)]$
 $\sum_{i \in I} \sum_{j \in J} \lambda_{ij}$
 $\hat{f} = \sum_{(m) \in \mathbb{Z}^d} \hat{c}_{ij}^{(m)} \pi_{ij}^{(m)}; \hat{c}_{ij}^{(m)} = d_m \int f(t)$
 $\sigma(m) = Mn \odot f(\theta) = \sum_{n=-\infty}^{\infty} \hat{f}(n) e^{in\theta}$
 $\lim_{j \rightarrow 1} \sum_{i=1}^N Y_i \geq m) \leq \frac{2(Np)^m}{m!}$
 $\sqrt{\frac{\Delta \phi(E)}{\Delta H(E)}} \frac{1}{|\hat{f}|} |\alpha| = T(f(\alpha))$
 $\|f, g\| \leq \|f\|_\infty \|g\|_1$
 $(f, g) \phi \leq \| \phi \|_\infty \| f \|_1 \| g \|_1$
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Paseky, May 19, 2019

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List of spring schools and speakers

1983 J. Bliedtner: Potential Theory - A Probabilistic Approach

1984 Ch. Berg: Harmonic Analysis and Potential Theory

1985 P. Loeb: Nonstandard Analysis

1986 M. Giaquinta, B. Giusti, G. Modica: Regularity of Weak Solutions of PDE's

1987 F. Hirschbruch: A Development of the Atiyah-Singer Theorems

1989 H. Bauer: Korovkin Theorems and Related Topics (Cancelled because of the

Preface

The Spring school “Variational Analysis and its Applications”, held in Paseky nad Jizerou in May 2019, is the 45th school in the traditional series of spring schools organized for students every year since 1983. At the same time, it is the 7th spring school in the series of schools dedicated to the study of variational analysis and related topics, first of which took place in 2000. We would like to thank to our distinguished speakers Helmut Gfrerer (Johannes Kepler University Linz, Austria), Tim Hoheisel (McGill University, Montréal, Québec, Canada) Alexander Ioffe (Technion, Haifa, Israel), Diethard Klatte (University of Zurich, Switzerland) Boris Mordukhovich (Wayne State University, Detroit MI, USA), and Jean-Paul Penot (Laboratoire Jacques-Louis Lions, Université Pierre et Marie Curie, Paris, France) for accepting our invitation to deliver series of talks at the school and, last but not least, for their cooperation in the time-demanding preparation of lectures notes. Prof. em. Diethard Klatte had to cancel his participation just shortly before these lecture notes went to print. We respect his wishes and include his prepared lecture notes in this volume despite not being able to give his lectures. We also thank to all the participants for attending our spring school.

These lecture notes are intended for the internal use of the school only.

Paseky, May 19, 2019

M. Červinka, M. Fabian, V. Kratochvíl, J. Lukeš, J. Outrata and M. Rmoutil