

Potential Theory

Proceedings of the International Conference on Potential
Theory, Nagoya (Japan), August 30 - September 4, 1990

Editor

Masanori Kishi



Walter de Gruyter · Berlin · New York 1992

Contents

Preface	V
Organizing Committee and Consultative Committee	VI
Invited Lectures	
David R. ADAMS <i>L^p potential theory techniques and nonlinear PDE</i>	1
Jürgen BLIEDTNER <i>Applications of Choquet theory to potential theory</i>	17
Claude DELLACHERIE <i>Une version non linéaire du théorème de Hunt</i>	25
Walter K. HAYMAN <i>Strict isoperimetric inequalities and asymmetry</i>	33
Lars Inge HEDBERG <i>Nonlinear potential theory</i>	43
Olli MARTIO <i>Potential theory and quasiconformal mappings</i>	55
Gabriel MOKOBODZKI <i>Maximal inequalities and potential theory</i>	65
Ivan NETUKA <i>The boundary behaviour of solutions of the Dirichlet problem</i>	75
Anthony G. O'FARRELL <i>Capacities in function theory</i>	93
Michael RÖCKNER <i>Potential theory on non-locally compact space via Dirichlet forms</i>	107
John C. TAYLOR <i>The Martin compactification of a symmetric space of non-compact type at the bottom of the positive spectrum : An introduction</i>	127
Jang-Mei WU <i>Level sets and the Green function</i>	141

Contributed Papers

Marco BIROLI

- Local properties of solutions to equations involving square
Hörmander's operators* 147

Andrej V. BITSADZE

- On the generalized Neumann problem* 155

Abderrahman BOUKRICHCHA

- Principe de Picard pour les mesures invariantes par rotation et applications* 161

Vladimir Ya. EIDERMAN

- Measure and capacity of exceptional sets arising in estimations of
δ-subharmonic functions* 171

Sirkka-Liisa A. ERIKSSON-BIQUE

- Balayage spaces, standard H-cones and hyperharmonic cones* 179

Jerzy A. GAWINECKI

- On the thermoelastic potential in three-dimensional hyperbolic
thermoelasticity theory* 193

Nikolai V. GRACHEV

- Representations and estimates for inverse operators of the potential
theory integral equations in a polyhedron* 201

Ashot HAKOBYAN

- Use of single layer potential in mixed problems of elasticity* 207

Vadim A. KAIMANOVICH

- Discretization of bounded harmonic functions on Riemannian
manifolds and entropy* 213

Victor I. KRUGLIKOV

- Capacities and mappings quasiconformal in the mean* 225

Takahide KUROKAWA

- Beppo Levi spaces and Riesz potential spaces* 229

Yoshihiro MIZUTA

- Boundary limits of harmonic functions in Sobolev-Orlicz classes* 235

Minoru MURATA

- Positive harmonic functions on rotational symmetric
Riemannian manifolds* 251

Massimo PICARDELLO and Wolfgang WOESS

- Examples of stable Martin boundaries of Markov chains* 261

Sundararaja RAMASWAMY <i>Comparison of liminf and fine liminf of positive superharmonic functions</i>	271
Valeri S. SEROV <i>Some problems of the potential theory for Schrödinger operator with singular potential</i>	275
Yuri V. SHESTOPALOV <i>Potential theory for Helmholtz operator and nonlinear eigenvalue problems</i>	281
Keiichi SHIBATA <i>On stationary points of the energy integral</i>	291
Abdullah SHIDFAR and M. A. HOSSEINI <i>Application of potential theory in biharmonic analysis</i>	299
Wayne SMITH and David A. STEGENGA <i>Sobolev imbeddings and integrability of harmonic functions on Hölder domains</i>	303
Noriaki SUZUKI <i>An estimate of harmonic measure with an application to subharmonic functions</i>	315
Hiroshi TANAKA <i>Kuramochi boundaries of Riemannian manifolds</i>	321
Frans van GOOL <i>On axiomatic non-linear potential theory</i>	331
Hisako WATANABE <i>The Neumann problem and Hausdorff measures</i>	345
WU Jiong Qi and GAO Qi-Ren <i>On potential extension and capacity on harmonic spaces</i>	361
Stepan S. ZARGARYAN <i>Singularities of the solution of integral equations of potential theory arising in problems of elasticity for non-homogeneous media</i>	367
Appendices	
List of participants	383
List of non-participating contributors	396
List of lectures	397