

EMS Tracts in Mathematics 4

EMS Tracts in Mathematics

Editorial Board:

Carlos E. Kenig (The University of Chicago, USA)

Andrew Ranicki (The University of Edinburgh, Great Britain)

Michael Röckner (Universität Bielefeld, Germany, and Purdue University, USA)

Vladimir Turaev (Department of Mathematics, Indiana University, Bloomington, USA)

Alexander Varchenko (The University of North Carolina at Chapel Hill, USA)

This series includes advanced texts and monographs covering all fields in pure and applied mathematics. *Tracts* will give a reliable introduction and reference to special fields of current research. The books in the series will in most cases be authored monographs, although edited volumes may be published if appropriate. They are addressed to graduate students seeking access to research topics as well as to the experts in the field working at the frontier of research.

1 Panagiota Daskalopoulos and Carlos E. Kenig, *Degenerate Diffusions*

2 Karl H. Hofmann and Sidney A. Morris, *The Lie Theory of Connected Pro-Lie Groups*

3 Ralf Meyer, *Local and Analytic Cyclic Homology*

Gohar Harutyunyan
B.-Wolfgang Schulze

Elliptic Mixed, Transmission and Singular Crack Problems



European Mathematical Society

Authors:

Gohar Harutyunyan
Institut für Mathematik
Carl von Ossietzky Universität Oldenburg
26111 Oldenburg, Germany
E-mail: harutyunyan@mathematik.uni-oldenburg.de

B.-Wolfgang Schulze
Institut für Mathematik
Universität Potsdam
Am Neuen Palais 10
14469 Potsdam, Germany
E-mail: schulze@math.uni-potsdam.de

2000 Mathematics Subject Classification: 35-02; 35J25, 35S15

Key words: Ellipticity on manifolds with singular boundaries, edge and corner pseudo-differential calculus, problems with mixed and transmission conditions, problems of Zarembo type, crack problems, meromorphic symbolic structures, relative index.

ISBN 978-3-03719-040-1

The Swiss National Library lists this publication in The Swiss Book, the Swiss national bibliography, and the detailed bibliographic data are available on the Internet at <http://www.helvetica.ch>.

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in other ways, and storage in data banks. For any kind of use permission of the copyright owner must be obtained.

© 2008 European Mathematical Society

Contact address:

European Mathematical Society Publishing House
Seminar for Applied Mathematics
ETH-Zentrum FLI C4
CH-8092 Zürich
Switzerland

Phone: +41 (0)44 632 34 36
Email: info@ems-ph.org
Homepage: www.ems-ph.org

Typeset using the authors' $\text{T}_\text{E}\text{X}$ files: I. Zimmermann, Freiburg
Printed in Germany

9 8 7 6 5 4 3 2 1