

JOURNAL OF APPLIED ANALYSIS

EDITORS-IN-CHIEF

Piotr Liczberski, *Łódź*

Krzysztof Ciesielski, *Morgantown*

MANAGING EDITOR

Lesław Gajek, *Łódź*

EDITORIAL BOARD

Jan Awrejcewicz, *Łódź*

Philippe Biane, *Marne-la-Vallée*

Vladimir Boltyanski, *Guanajuato*

Michel Chipot, *Zürich*

Udayan B. Darji, *Louisville*

Celso Grebogi, *Aberdeen*

Wilfried Hazod, *Dortmund*

Ryszard Jajte, *Łódź*

Alexander Kharazishvili, *Tbilisi*

Sándor Komlósi, *Pécs*

J. Martin Lindsay, *Lancaster*

Andrzej Luczak, *Łódź*

Zhi-Ming Ma, *Beijing*

Janusz Matkowski, *Zielona Góra*

Reinhard Mennicken, *Regensburg*

Boris Mordukhovich, *Detroit*

Andrzej Nowakowski, *Łódź*

Alexander Olevskii, *Tel Aviv*

Stanislav Pohozaev, *Moscow*

Simeon Reich, *Haifa*

R. Tyrrell Rockafellar, *Seattle*

Saharon Shelah, *Jerusalem*

Yoshihiro Shibata, *Tokyo*

Lionel Thibault, *Montpellier*

Władysław Wilczyński, *Łódź*

Hong-Kun Xu, *Kaohsiung*

Dariusz Zagrodny, *Warsaw*

Wojciech Zajączkowski, *Warsaw*

DE GRUYTER

JOURNAL OF APPLIED ANALYSIS is an international journal devoted to applications of mathematical analysis. Among them there are applications to economics (in particular finance and insurance), mathematical physics, mechanics and computer sciences. Topics include applications of mathematical analysis (real and complex, harmonic, convex, variational), differential equations, dynamical systems, optimization (linear, nonlinear, convex, nonsmooth, multicriterial), optimal control, stochastic modeling and probability theory, numerical methods. The journal also welcomes works showing connections between mathematical analysis and other domains of mathematics such as geometry, topology, logic and set theory.

Journal of Applied Analysis is jointly produced by the Institute of Mathematics of the Technical University of Łódź and De Gruyter.

All information regarding notes for contributors, subscriptions, Open access, and orders is available online at www.degruyter.com/jaa.

ABSTRACTED/INDEXED IN Celdes • CNKI Scholar (China National Knowledge Infrastructure) • CNPIEC • EBSCO: TOC Premier; Discovery Service • Elsevier: SCOPUS • Google Scholar • Index Copernicus • J-Gate • Mathematical Reviews (MathSciNet) • Naviga (Softweco) • Primo Central (ExLibris) • SCImago (SJR) • Summon (Serials Solutions/ProQuest) • TDOne (TDNet) • Ulrich's Periodicals Directory/ulrichsweb • WorldCat (OCLC) • Zentralblatt Math

ISSN 1425-6908 · e-ISSN 1869-6082

EDITORIAL OFFICE Journal of Applied Analysis, Institute of Mathematics, Technical University of Łódź, Wólczańska 215, 93-005 Łódź, Poland.
Email: jaa@info.p.lodz.pl

RESPONSIBLE EDITOR Lesław Gajek, Institute of Mathematics, Technical University of Łódź, Wólczańska 215, 93-005 Łódź, Poland.
Email: gal@p.lodz.pl

JOURNAL MANAGER Theresa Haney, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany.
Tel.: +49 (0)30 260 05-375, Fax: +49 (0)30 260 05-250. Email: theresa.haney@degruyter.com

RESPONSIBLE FOR ADVERTISEMENTS Panagiota Herbrand, De Gruyter, Rosenheimer Straße 143, 81671 München, Germany.
Tel.: +49 (0)89 769 02-394, Fax: +49 (0)89 769 02-350. Email: panagiota.herbrand@degruyter.com

© 2014 Walter de Gruyter GmbH, Berlin/Boston

TYPESETTING Dimler & Albroscheit, Münchenberg

PRINTING Franz X. Stückle Druck und Verlag e.K., Ettenheim
Printed in Germany



Offenlegung der Inhaber und Beteiligungsverhältnisse gem. § 7a Abs. 1 Ziff. 1, Abs. 2 Ziff. 3 des Berliner Pressegesetzes: Die Gesellschafter der Walter de Gruyter GmbH sind: Cram, Gisela, Rentnerin, Berlin; Cram, Elsbeth, Pensionärin, Rosengarten-Alvesen; Cram, Margret, Studienrätin i.R., Berlin; Cram, Dr. Georg-Martin, Unternehmens-Systemberater, Stadtbergen; Cram, Maïke, Berlin; Cram, Jens, Mannheim; Cram, Ingrid, Betriebsleiterin, Tuxpan / Michoacan (Mexiko); Cram, Sabina, Mexico, DF (Mexiko); Cram, Silke, Wissenschaftlerin, Mexico DF (Mexiko); Cram, Björn, Aachen; Cram, Ella Anita, Rentnerin, Berlin; Cram, Berit, Greifswald; Cram-Gomez, Susanne, Mexico DF (Mexiko); Cram-Heydrich, Walter, Mexico DF (Mexiko); Duvenbeck, Brigitta, Oberstudienrätin i.R., Bad Homburg; Fund, Dr. Sven, geschäftsführender Gesellschafter, Berlin; Gädeke, Gudula, M.A., Atemtherapeutin/Lehrerin, Tübingen; Gädeke, Martin, Einzelunternehmer, Würzburg; Lubasch, Dr. Annette, Ärztin, Berlin; Schütz, Dr. Christa, Ärztin, Mannheim; Schütz, Sonja, Berlin; Schütz, Juliane, Berlin; Schütz, Antje, Berlin; Schütz, Valentin, Berlin; Seils, Dorothee, Apothekerin, Stuttgart; Seils, Gabriele, Journalistin, Berlin; Seils, Dr. Clara-Eugenie, Oberstudienrätin i.R., Reppenstedt; Seils, Christoph, Journalist, Berlin; Siebert, John-Walter, Pfarrer, Oberstenfeld; Walter de Gruyter Stiftung, Berlin.

Contents

Simeon Reich, Alexander J. Zaslavski

Porosity and the bounded linear regularity property — 1

Ekaterina G. Ganenkova, Victor V. Starkov

Analytic in planar domains functions with preassigned asymptotic set — 7

Ghislain R. Franssens

Multiplication of the distributions $(x \pm i0)^z$ — 15

Bo-Yan Xi, Jü Hua, Feng Qi

Hermite–Hadamard type inequalities for extended s -convex functions on the co-ordinates in a rectangle — 29

Antonio Boccuto, Xenofon Dimitriou, Nikolaos Papanastassiou, Władysław Wilczyński

Modes of ideal continuity and the additive property in the Riesz space setting — 41

Alexander Klauer

On complex Fermi curves of two-dimensional, periodic Schrödinger operators — 55

Agnieszka Sibelska

On the geometrical properties of some classes of complex harmonic functions defined by analytic or coefficient conditions with complex parameter — 77

Arash M. Ghorbanalizadeh

On the order of weighted approximation of unbounded functions by some generalizations of Gadjiev–Ibragimov operators — 87

Roman Wituła, Edyta Hetmaniok, Konrad Kaczmarek

On series whose rearrangements possess discrete sets of limit points — 93

Erratum

Kayyunnapara Thomas Joseph

A system of two conservation laws with flux conditions and small viscosity — 97

