

JOURNAL OF INVERSE AND ILL-POSED PROBLEMS

EDITOR-IN-CHIEF

Sergey I. Kabanikhin, Novosibirsk

MANAGING EDITOR

Maxim A. Shishlenin, Novosibirsk

ADVISORY BOARD

Avner Friedman, Columbus

Rainer Kress, Göttingen

Peter Lax, New York

Zuhair Nashed, Orlando

Vladimir V. Romanov, Novosibirsk

Vladimir V. Vasin, Ekaterinburg

EDITORIAL BOARD

Giovanni Alessandrini, Trieste

Habib Ammari, Zurich

Tatiana Bubba, Bath

Alexander L. Bukhgeim,

Novosibirsk/Whichita

Jin Cheng, Shanghai

Christian Clason, Graz

Dinh Nho Hào, Hanoi

Alemdar Hasanoglu, Izmir

Bernd Hofmann, Chemnitz

Thorsten Hohage, Göttingen

Maarten V. de Hoop, Houston

Masaru Ikehata, Higashihiroshima

Mikhail Yu. Kokurin, Yoshkar-Ola

Daniel Lesnic, Leeds

Jijun Liu, Nanjing

Alfred K. Louis, Saarbrücken

Gen Nakamura, Sapporo

Roman G. Novikov, Paris/Moscow

Ivan Oseledets, Skolkovo

Valery V. Pickalov, Novosibirsk

Eric Todd Quinto, Medford

Ronny Ramlau, Linz

Karl Sabelfeld, Novosibirsk

Paul Sacks, Ames

Alexander Shanatin, Moscow

Otmar Scherzer, Vienna

Andrey Shkalikov, Moscow

Plamen D. Stefanov, West Lafayette

Gunther Uhlmann, Seattle

Yanfei Wang, Beijing

Konstantin Vorontsov, Moscow

Anatoly G. Yagola, Moscow

Masahiro Yamamoto, Tokyo

Vyacheslav A. Yurko, Saratov

Jun Zou, Hong Kong

DE GRUYTER

JOURNAL OF INVERSE AND ILL-POSED PROBLEMS aims to present original articles on the theory, numerics and applications of inverse and ill-posed problems. These inverse and ill-posed problems arise in mathematical physics and mathematical analysis, geophysics, acoustics, electrodynamics, tomography, medicine, ecology, financial mathematics etc. Articles on the construction and justification of new numerical algorithms of inverse problem solutions are also published.

ISSN 0928-0219 · e-ISSN 1569-3945 · CODEN JIIPA4

Please see the journal's homepage for Abstracting & Indexing Services information.

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

RESPONSIBLE EDITOR Sergey I. Kabanikhin, Institute of Computational Mathematics and Mathematical Geophysics, Russian Academy of Sciences, Siberian Branch, prospect Lavrentieva 6, 630090 Novosibirsk, Russia.
e-mail: ksi52@mail.ru

PUBLISHER Walter de Gruyter GmbH, Berlin/Boston, Genthiner Straße 13, 10785 Berlin, Germany

JOURNAL COORDINATOR Masha Dorogova, e-mail: masha.dorogova@degruyter.com

ADVERTISEMENTS e-mail: anzeigen@degruyter.com

© 2025 Walter de Gruyter GmbH, Berlin/Boston

TYPESETTING WisSat Publishing + Consulting GmbH, Fürstenwalde

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

Questions about General Product Safety Regulation: productsafety@degruyterbrill.com



Contents

Research Articles

Gi-Ren Liu

Local convergence of the error-reduction algorithm for real-valued objects — 107

Faxuan Wu, Qinglong He, Jiangyan Zou, Zexian Liu

A rotation total variation regularization for full waveform inversion — 131

Harshit Bajpai, Gaurav Mittal, Ankik Kumar Giri

Stochastic data-driven Bouligand–Landweber method for solving non-smooth inverse problems — 153

Shavkat Alimov, Ravshan Ashurov

On determining the fractional exponent of the subdiffusion equation — 171

Khelili Besma, Boussetila Nadjib, Benrabah Abderafik

Tow-parameter quasi-boundary value method for a backward abstract time-degenerate fractional parabolic problem — 183

Yi-Hsuan Lin

Determining both leading coefficient and source in a nonlocal elliptic equation — 207

Review Article

Alexander Mikhaylov, Victor Mikhaylov

Discrete dynamical systems: Inverse problems and related topics — 217

Research Articles

Nguyen Van Thang, Nguyen Van Duc

Stability estimates for an inverse problem of determining time-dependent coefficients in a system of parabolic equations — 253

Yu Ping Wang, Tzong-Mo Tsai, Shahrbanoo Akbarpoor, Chung-Tsun Shieh

Numerical solutions to inverse nodal problems for the Sturm–Liouville operator and their applications — 269

Shuang Liu, Sergey Kabanikhin, Sergei Strijhak, Ying-Ao Wang, Ye Zhang

Revisiting linear machine learning through the perspective of inverse problems — 281

