



NONLINEAR ANALYSIS: REAL WORLD APPLICATIONS

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

- **Description** p.1
- **Impact Factor** p.1
- **Abstracting and Indexing** p.2
- **Editorial Board** p.2
- **Guide for Authors** p.4



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DESCRIPTION

Nonlinear Analysis: Real World Applications welcomes all research articles of the highest quality with special emphasis on applying techniques of **nonlinear analysis** to model and to treat **nonlinear phenomena** with which nature confronts us. Coverage of applications includes any branch of science and technology such as solid and fluid mechanics, material science, mathematical biology and chemistry, control theory, and inverse problems.

The aim of *Nonlinear Analysis: Real World Applications* is to publish articles which are predominantly devoted to employing methods and techniques from analysis, including partial differential equations, functional analysis, dynamical systems and evolution equations, calculus of variations, and bifurcations theory.

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Nonlinear PDEs

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Carleman Estimates. Inverse Problems in Partial Differential Equations.

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Navier-Stokes equations, Euler equations, Fluid-structure interaction, Quasi-geostrophic equation, Unique continuation, Partial regularity.

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Parabolic Partial Differential Equations.

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Optimal Control Theory and its Biomedical Applications, Mathematical Modeling in Cancer Systems Biology.

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Nonlinear Dispersive Equations

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Nonlinear partial differential equations, non-Newtonian fluids

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Elliptic, Nonlinear PDEs

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ODEs; Hyperbolicity; Integrability

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Partial Differential Equations of Parabolic Type, Evolution Equations, Population Dynamics.

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Parabolic PDEs, Formation of Singularities

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Parabolic PDEs, Population Biology

M. Yamamoto, University of Tokyo, Tokyo, Japan

Inverse Problems, Uniqueness, Conditional Stability, Regularization, Numerical Reconstruction, Mathematics for Industry.

G. Yin, Wayne State University (WSU), Detroit, Michigan, USA

Stochastic Approximation, Stochastic Optimization, Stochastic Control and Stability, Numerical Methods for Stochastic Systems.

Z. Yin, Sun Yat-Sen University, Guangzhou, China & Macau University of Science and Technology, Macao, China

Nonlinear dispersive wave equations; Shallow water wave equations

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INTRODUCTION

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