

## **EMS Textbooks in Mathematics**

EMS Textbooks in Mathematics is a book series aimed at students or professional mathematicians seeking an introduction into a particular field. The individual volumes are intended to provide not only relevant techniques, results and their applications, but afford insight into the motivations and ideas behind the theory. Suitably designed exercises help to master the subject and prepare the reader for the study of more advanced and specialized literature.

Jørn Justesen and Tom Høholdt, *A Course In Error-Correcting Codes*Markus Stroppel, *Locally Compact Groups*Peter Kunkel and Volker Mehrmann, *Differential-Algebraic Equations*Dorothee D. Haroske and Hans Triebel, *Distributions, Sobolev Spaces, Elliptic Equations*Thomas Timmermann, *An Invitation to Quantum Groups and Duality*Marek Jarnicki and Peter Pflug, *First Steps in Several Complex Variables: Reinhardt Domains* 

## Oleg Bogopolski

## Introduction to Group Theory



## Author:

Oleg Bogopolski

Technische Universität Dortmund

Fakultät Mathematik Lehrstuhl VI (Algebra) Vogelpothsweg 87 44221 Dortmund

Germany

E-mail: Oleg\_Bogopolski@yahoo.com

and Sobolev Institute of Mathematics

Siberian Branch of the Russian Academy of Sciences

4 Acad. Koptyug avenue 630090 Novosibirsk

Russia

Originally published by Institute of Computer Science, Moscow-Izhevsk 2002, under the title Введение в теорию групп, ISBN 5-93972-165-6

2000 Mathematical Subject Classification (primary; secondary): 20-01; 20D08, 20E05, 20E06, 20E08, 20F28

Key words: Simple groups, sporadic groups, Steiner systems, codes, free products with amalgamation, HNN extensions, actions on trees, free groups and their automorphisms, train tracks

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.helveticat.ch.

ISBN 978-3-03719-041-8

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 author's TEX files: I. Zimmermann, Freiburg Printed on acid-free paper produced from chlorine-free pulp. TCF  $\infty$  Printed in Germany

987654321