Morningside Lectures in Mathematics
Volume II

Lectures on the Analysis of Nonlinear Partial Differential Equations: Part 2

edited by

Fanghua Lin
Xueping Wang
Ping Zhang

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MORNINGSIDE LECTURES IN MATHEMATICS

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Preface to the Second Volume

This book is a sequel to the previous volume *Lectures on the Analysis of Nonlinear Partial Differential Equations*, Vol. 1. In this second volume, we have collected lectures by Marco Cannone, Chongsheng Cao and Jiahong Wu, Eduard Feireisl, Thierry Goudon, Jean-Claude Saut, Zhongwei Shen and Vsevolod A. Solonnikov. We greatly appreciate their time and efforts to provide us with their excellent lectures and notes. We believe these lecture notes will serve as valuable references and up-to-date descriptions of current developments in various research topics in nonlinear partial differential equations (PDE).

The notes collected here come from seminars on "Analysis in Partial Differential Equations" that were part of a special year-long program (from April to November 2009), which took place at the Morningside Center of the Academy of Mathematics and Systems Science, Chinese Academy of Sciences (CAS). We thank the Academy of Mathematics and Systems Science as well as the Morningside Center of CAS for financial support. We also wish to thank several other distinguished visitors who delivered excellent special lectures: Hammadi Abidi, Jean-Yves Chemin, Demetrios Christodoulou, Hideo Kozono, Thomas Hou, Marius Paicu, and others.

Finally, we wish to thank Prof. Lo Yang, Prof. Lei Guo, and Prof. Yuefei Wang, for their continued supports over all these years which were essential to the success of this PDE program. We also thank Dr. Guilong Gui for the careful preparation of the Latex files that make up this entire book.

Fanghua Lin in New York
Ping Zhang in Beijing
On June 26, 2010

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