Lecture Notes in Mathematics

1225

Inverse Problems

Lectures given at the 1st 1986 Session of the
Centro Internazionale Matematico Estivo (C.I.M.E.)
held at Montecatini Terme, Italy, May 28 – June 5, 1986

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Editor

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INTRODUCTION

This volume collects the texts of the lectures and seminars delivered at the CIME Session on Inverse Problems (Montecatini Terme, Italy, May 28-June 5, 1986).

The Session was designed to present significant trends in the nowadays growing field of ill-posed and inverse problems, and consisted of the following courses, six lectures each: (i) Inverse eigenvalue problems for second-order and fourth-order Sturm-Liouville differential equations (V. Barcilon, University of Chicago); (ii) Fredholm integral equations of the first kind and regularization methods (M. Bertero, Università di Genova); (iii) Mathematical problems arising from tomography and related topics (A.F. Grunbaum, University of California, Berkeley); (iv) Numerical methods for large-scale ill-posed problems (F. Natterer, University of Munster). Furthermore, seminars were given on integral equations arising in optics (E.R. Pike, Royal Signals and Radar Establishment, Great Malvern, UK) and functional analysis arguments for classes of linear ill-posed problems (Ch. Groetsch, University of Cincinnati).

The editor is heartily grateful to all speakers for the excellent and stimulating atmosphere they were able to create in Montecatini, as well as for the accuracy of their notes, and thanks to CIME staff for its efficient job.

Firenze, July 1986

                                                    Giorgio Talenti

C.I.M.E. Session on "Inverse Problems"

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TABLE OF CONTENTS