LUSTERNIK-SOBO

ELEMENTS
OF
FUNCTIONAL ANA

THIRD EDITION

ABOUT THE BOOK

Functional analysis was born in the early years of the twentieth century as an independent discipline. Its origins can be traced to the development of set-theoretic topology, of precise definitions of function spaces, and of axiomatic mathematics and abstract structures.

The first edition of the monograph was based on the lecture series developed by V. J. Sobelev and the research articles of L. A. Lusternik. Subsequently, the enlarged second edition of the book included material on Sobolev's spaces, linear operators and spectral theory of non-bounded operators mainly.

Over the past five decades, Functional Analysis has played a role in several key areas such as Quantum Mechanics vis-à-vis the usage of Hermitian matrix, Financial Mathematics, while Partial Differential Equations, which has a diverse range of applications, is a field originating wholly from this branch.

Keeping these recent contributions in perspective, the third edition introduces the readers to approximation theory developed via functional analysis tools. By translating various problems in terms of the density questions, the problems of existence and uniqueness of the best approximation have been discussed in some common function spaces.

Apart from being a comprehensive textbook on Functional Analysis for final year undergraduate and graduate level, this book can be referred to for a one-semester course in approximation theory.

OTHER TITLES OF INTEREST

1. Korovkin's Linear Operators and Approximation Theory - A.R. Gairola (Editor)
ISBN: 9788170750925

2. Matrix Theory: Selected Topics and Useful Results - M.L. Mehta
ISBN: 9788170750796