

This volume consists of updated lecture notes from a course given at MIT, by one of the chief contributors to the modern theory of the Radon transform. These notes provide the most agreeable introduction to the Radon transform currently available. A reader will be charmed by the interplay of geometry and analysis exhibited here and reassured by the explicit nature of the formulas obtained.

L. Zalcman, SIAM Review, 1983, p. 275, reviewing the first edition

"Until now the subject [The Radon transform] has lacked anything approaching a systematic exposition aimed at beginners. Publication of the present volume...by one of the chief contributors to the modern theory of the Radon transform, is thus timely and welcome...Helgason's notes provide the most agreeable introduction to the Radon transform currently available.

[A] reader will be charmed by the interplay of geometry and analysis exhibited here and reassured by the explicit nature of the formulas obtained. [Chapter 3] is the heart of the second half of the book and, on balance, provides an admirable introit to a branch of analysis which deserves to be known by a wider public."

--SIAM Review (on the first edition)

"This is the second edition of the famous book by Sigurdur Helgason which has been updated in accordance with recent new results in this area. The second edition preserves the nice introductory flavor of the first one. The book will be highly appreciated by the mathematical community."

--Mathematical Reviews (on the second edition)

"...well-written and a pleasure to read...provides clear explanations and illustrative figures... Every important point receives a clear proof. The author puts a great deal of effort into motivating his readers. The chapters have been updated by the inclusion of some applications and by giving indications in bibliographical notes of some recent developments...

[an] excellent introduction to an area of mathematics which seems to have attracted much new interest...highly recommendable...for graduate students... and researchers."

--ZAA (on the second edition)

"Helgasons Buch ist ein Meisterwerk über die Radon Transformation"

--Ortner (Internat. Math. Nachr.)