
VOLUME II – PART 3

(to be published in February 1962)

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Convex functions and Orlicz spaces

Translated from
the first Russian
edition by
Leo F. Boron

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The reader will find that this book, written by two recognized authorities in this branch of mathematics, is a rather complete study of convex functions (in a form convenient for the classification of Orlicz spaces) and of Orlicz spaces. Some results, due to the authors, appear here in complete form for the first time. In the third chapter of the book, conditions for continuity and complete continuity of some operators from one Orlicz space into another are investigated — first for linear integral operators, then for simple non-linear operators, and finally for non-linear integral operators. Orlicz and Luxemburg norms are discussed. Other topics taken up are the Fréchet derivative, the Gâteaux gradient, and the gradient of the Luxemburg and Orlicz norms. Special attention is given to the Uryson and Hammerstein operators. The monograph is quite readable and will be useful to students of functional analysis and research workers in this field.

The student who has studied Natanson's *Theory of functions of a real variable* and Zaanen's *Linear analysis* (the sections dealing with Orlicz spaces) will find this volume accessible.

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