

Global Analysis of Minimal Surfaces

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Preface

This book is the third volume of a treatise on minimal surfaces consisting of altogether three volumes which can be read and studied independently of each other. The central theme is *boundary value problems for minimal surfaces*, such as Plateau's problem. The present treatise forms a greatly extended version of the monograph *Minimal Surfaces I, II* by U. Dierkes, S. Hildebrandt, A. Küster, and O. Wohlrab, published in 1992, which is often cited in the literature as [DHKW]. New coauthors are Friedrich Sauvigny for the first volume and Anthony J. Tromba for the second and third volume.

The title of this third volume might be somewhat misleading since many aspects of minimal surface theory treated in the preceding two volumes are also of a global nature. Moreover, the lecture notes collected in [GTMS] deal with problems that are essentially different from those investigated here. Nevertheless we think that the title is justified, because at least Part II of the present book is in an essential way based on notions, methods, and results of general *Global Analysis*. Furthermore, also Part I sheds light on certain global aspects of minimal surfaces.

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