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PREFACE

The configuration of an equilibrium free surface, such as a soap film or capillary surface or freely standing dome, is determined physically by general variational principles. The associated mathematical questions are—in essential ways—nonlinear, but they are basically geometrical and they lend themselves to study by geometrical methods. The physical problems lead to questions of deep independent mathematical interest, which have stimulated new mathematical developments and led to specific results of idiosyncratic nature.

The present volume contains a selection of papers relating to such problems, from differing points of view. The selection is by no means exhaustive, but it is hoped it will provide some indication of the kind of activity that is currently in progress. The reader may note that several of the papers contain closely related or overlapping results, that were obtained independently, sometimes concomitantly, in independent ways. The volume has been organized so as to juxtapose those papers, to the extent that could be done.

R. Finn

