

*Librería*  
***Bonilla y Asociados***  
*desde 1950*



**Título:** Infinitesimal Geometry Of Quasiconformal And  
Bi-Lipschitz Mappings In The Plane

**Autor:** Bogdan Bojarski

**Precio:** \$1219.00

**Editorial:**

**Año:** 2013

**Tema:**

**Edición:** 1<sup>a</sup>

**Sinopsis**

**ISBN:** 9783037191224

This book is intended for researchers interested in new aspects of local behavior of plane mappings and their applications. The presentation is self-contained, but the reader is assumed to know basic complex and real analysis.

The study of the local and boundary behavior of quasiconformal and bi-Lipschitz mappings in the plane forms the core of the book. The concept of the infinitesimal space is used to investigate the behavior of a mapping at points without differentiability. This concept, based on compactness properties, is applied to regularity problems of quasiconformal mappings and quasiconformal curves, boundary behavior, weak and asymptotic conformality, local winding properties, variation of quasiconformal mappings, and criteria of univalence. Quasiconformal and bi-Lipschitz mappings are instrumental for understanding elasticity, control theory and tomography, and the book also offers a new look at the classical areas such as the boundary regularity of a conformal map. Complicated local behavior is illustrated by many examples.

The text offers a detailed development of the background for graduate students and researchers. Starting with the classical methods to study quasiconformal mappings, this treatment advances to the concept of the infinitesimal space and then relates it to other regularity properties of mappings in Part II. The new unexpected connections between quasiconformal and bi-Lipschitz mappings are treated in Part III. There is an extensive bibliography.

A publication of the European Mathematical Society (EMS). Distributed within the Americas by the American Mathematical Society.

**Readership**

Researchers interested in new aspects of local behavior of plane mappings and their applications.

*Librería*  
***Bonilla y Asociados***  
*desde 1950*



Table of Contents

I. Quasiconformal Mappings in the Plane !Background of the theory  
!Conformal invariants  
!Definitions of quasiconformal maps  
!Compactness and convergence theory  
!Beltrami differential equation  
II. Infinitesimal Geometry of Quasiconformal Maps !Infinitesimal space  
!Asymptotically conformal curves  
!Conformal differentiability  
!Points of maximal stretching  
!Lipschitz continuity of quasiconformal maps  
!Regularity of quasiconformal curves  
!Regularity of conformal maps at the boundary  
III. Applications of Quasiconformal Maps !John's rotation problem  
!Variation of quasiconformal maps  
!Criteria of univalence  
!Bibliography  
!Index