Hyperbolic Geometry From A Local Viewpoint

A self-contained text on hyperbolic geometry for plane domains, ideal for graduate students and academic researchers.Written for graduate students, this book presents topics in 2-dimensional hyperbolic geometry. The authors begin with rigid motions in the plane which are used as motivation for a full development of hyperbolic geometry in the unit disk. The approach is to define metrics from an infinitesimal point of view, first the density is defined and then the metric via integration. The study of hyperbolic geometry in arbitrary domains requires the concepts of surfaces and covering spaces as well as uniformization and Fuchsian groups. These ideas are developed in the context of what is used later. The authors then provide a detailed discussion of hyperbolic geometry for arbitrary plane domains. New material on hyperbolic and hyperbolic-like metrics is presented. These are generalizations of the Kobayashi and Caratheodory metrics for plane domains. The book concludes with applications to holomorphic dynamics including new results and accessible open problems. EAN/ISBN : 9780511271595 Publisher(s): Cambridge University Press Format: ePub/PDF Author(s): Keen, Linda - Lakic, Nikola

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