

COMPLEX ANALYSIS: A BRIEF TOUR INTO HIGHER DIMENSIONS

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The classification of open domains in \mathbb{C} is simple and well known: they are covered either by \mathbb{C} or by the unit ball, in particular every simply connected proper subdomain of \mathbb{C} is biholomorphic to the unit ball. In higher dimensions the situation is very different. We will look at domains in \mathbb{C}^n from several points of view, touching topics as extension of holomorphic functions, differential geometry of their boundaries, and existence of sections of holomorphic vector bundles.

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