Convex Subordination Chains in Several Complex Variables

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Abstract. In this paper we study the notion of a convex subordination chain in several complex variables. We obtain certain necessary and sufficient conditions for a mapping to be a convex subordination chain, and we give various examples of convex subordination chains on the Euclidean unit ball in $\mathbb{C}^n$. We also obtain a sufficient condition for injectivity of $f(z/\|z\|, \|z\|)$ on $B^n \setminus \{0\}$, where $f(z,t)$ is a convex subordination chain over $(0,1)$.