Approximation and the Topology of Rationally Convex Sets

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Abstract. Considering a mapping $g$ holomorphic on a neighbourhood of a rationally convex set $K \subset \mathbb{C}^n$, and range into the complex projective space $\mathbb{C}P^m$, the main objective of this paper is to show that we can uniformly approximate $g$ on $K$ by rational mappings defined from $\mathbb{C}^n$ into $\mathbb{C}P^m$. We only need to ask that the second Čech cohomology group $\check{H}^2(K, \mathbb{Z})$ vanishes.

Received by the editors December 13, 2004; revised March 22, 2005.
Research supported by Cinvestav and Conacyt, México
AMS subject classification: 32E30, 32Q55.
Keywords: Rationally convex, cohomology and homotopy.