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On the CR-Structure of Certain Linear Group Orbits in Infinite Dimensions

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Abstract. For large classes of complex Banach spaces (mainly operator spaces) we consider orbits of finite rank elements under the group of linear isometries. These are (in general) real-analytic submanifolds of infinite dimension but of finite CR-codimension. We compute the polynomial convex hull of such orbits M explicitly and show as main result that every continuous CR-function on M has a unique extension to the polynomial convex hull which is holomorphic in a certain sense. This generalizes to infinite dimensions results from a recent joint paper with D. Zaitsev in *Inventiones math.* 153, 45-104.

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