

**A counterexample related to analytic structures in polynomially  
convex hulls**

**Speaker**

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**Abstract**

The purpose of this talk is to present a short example of the following type: Let  $K \subset \mathbb{C}^n$  be a compact set, and let

$$\hat{K} := \{z \in \mathbb{C}^n : |f(z)| \leq \max_K |f| \forall f \in \mathbb{C}[z_1, \dots, z_n]\}$$

denote its polynomially convex hull. Assume that there exists a point  $p \in \hat{K} \setminus K$ . Then in general it is not possible to find a sequence  $(A_j)$  of analytic varieties with boundary  $bA_j$  such that  $p \in A_j$  for every  $j \in \mathbb{N}$  and  $\lim_{j \rightarrow \infty} bA_j \subset K$ .