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## Real and complex analytic sets. The relevance of Segre varieties

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**Abstract.** Let  $X \subset \mathbb{C}^n$  be a closed real-analytic subset and put

$$\mathcal{A} := \{z \in X \mid \exists A \subset X, \text{ germ of a complex-analytic set, } z \in A, \dim_z A > 0\}$$

This article deals with the question of the structure of  $\mathcal{A}$ . In the main result a natural proof is given for the fact, that  $\mathcal{A}$  always is closed. As a main tool an interesting relation between complex analytic subsets of  $X$  of positive dimension and the Segre varieties of  $X$  is proved and exploited.

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