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## Extensions of the disc algebra

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We determine the set  $\tilde{A}(D)$  of uniform limits of polynomials on the closed unit disc  $\overline{D}$  with respect to the chordal metric  $\chi$  on  $\mathbb{C} \cup \{\infty\}$ . We study properties of the elements of  $\tilde{A}(D)$ , as well as topological properties of the class  $\tilde{A}(D)$  endowed with its natural metric topology. More generally, we examine analogous questions replacing  $\mathbb{C} \cup \{\infty\}$  by an arbitrary metrizable compactification of  $\mathbb{C}$  and replacing the closed unit disc  $\overline{D}$  by other compact sets (Mergelyan's theorem). The set of universal Taylor series in the sense of Luh and Chui and Parnes contained in  $\tilde{A}(D)$  is  $G_\delta$  and dense in  $\tilde{A}(D)$ . Are there any such universal series in  $\tilde{A}(D) \setminus A(D)$ , where  $A(D)$  denotes the classical disc algebra?

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