## Sudip Kumar Acharyya, Dibyendu De An interesting class of ideals in subalgebras of C(X) containing $C^*(X)$

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**Abstract:** In the present paper we give a duality between a special type of ideals of subalgebras of C(X) containing  $C^*(X)$  and z-filters of  $\beta X$  by generalization of the notion z-ideal of C(X). We also use it to establish some intersecting properties of prime ideals lying between  $C^*(X)$  and C(X). For instance we may mention that such an ideal becomes prime if and only if it contains a prime ideal. Another interesting one is that for such an ideal the residue class ring is totally ordered if and only if it is prime.

**Keywords:** Stone-Čech compactification, rings of continuous functions, maximal ideals,  $z_A^{\beta}$ -ideals

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