

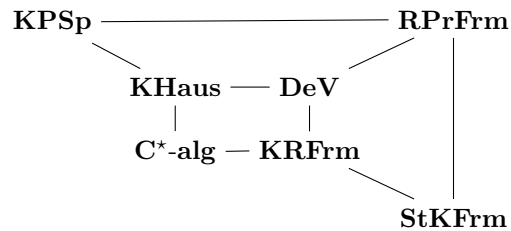
# A Journey through categories

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Let  $X$  be a compact Hausdorff space. It is known that  $X$  can be characterized by its ring of real continuous functions, by its lattice of regular open subsets or more simply by its frame of open subsets. These characterizations lead to dualities between the category **KHaus**, of compact Hausdorff space and respectively the categories **C\*-alg**, of commutative  $C^*$ -algebras, **DeV** of de Vries algebras and **KRFrm** of compact regular frames. We thus get a square of dualities and equivalences.

G.Bezhanishvili and J.Harding extended a part square to dualities between the categories **KPSp** of compact pospaces, **RPrFrm** of regular proximity frames and **StKFrm** of stably compact frames.

We thus get the square of dualities and equivalences extended this way.



In this talk, we will first journey through the known categories, dualities and equivalences, then try to complete the outside triangle, looking for a category generalizing the  $C^*$ -algebras.