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## Universal algebra and operator algebra

The groupoid approach to  $C^*$ -algebras generates analytic data from topological data. The latter has a combinatorial flavour but is still amenable to the tools of analysis. On the other hand, the inverse semigroup approach to  $C^*$ -algebras generates them from purely combinatorial data.

In this talk, we take a step further along this axis, by describing an approach to  $C^*$ -algebras generated by certain kinds of variety, in the sense of universal algebra. These are varieties of sets equipped with an action by a monoid  $M$  and a Boolean algebra  $B$  which interact in an appropriate way. Each such variety corresponds to an ample topological groupoid, and the category of models of the variety can be seen as a delinearisation of the category of modules over the Steinberg algebra of the groupoid; moreover, properties of the groupoid can be translated into properties of the associated pair  $(B, M)$ .

If time permits, we will translate some popular examples of ample topological groupoids into this new setting to give some sense of how everything fits together.