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Ideal structure of C*-algebras from dynamics

I will discuss recent advances in the understanding of ideal structure of C*-algebras built from multidimensional dynamical systems. In nice cases, the ideal structure is computed in terms of the irreducible components of the system. In general, it is notoriously difficult to determine this fundamental structure. In recent work with Toke Carlsen and Aidan Sims, we study systems of commuting local homeomorphisms (e.g. certain multidimensional symbolic systems or higher-rank graphs) and characterise the ideal structure when the systems admit so-called 'harmoneous bisections'. In particular, this provides the first complete description for 2-graph C*-algebras.