Principal groupoid models for UCT Kirchberg algebras

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I will begin with a brief overview of Renault's construction of groupoid models for the Cuntz algebras O_n and the resulting Cartan subalgebras.
Renault's groupoid models have isotropy (i.e. the dynamics has some fixed points). This means that the canonical Cartan subalgebras in O_n are not C*-diagonals in the sense of Kumjian (i.e. they fail to have the unique extension property for pure states). In particular, these Cartan subalgebras have infinite diagonal dimension in the sense of Li--Liao--Winter.

In the second half of the talk, I will discuss my recent work with Philipp Sibbel on constructing groupoid models for the Cuntz algebras (and more general UCT Kirchberg algebras) that have no isotropy (i.e. principal groupoids). These groupoid models give rise to C*-diagonals inside all the Cuntz algebras, all stable UCT Kirchberg algebras, and most unital UCT Kirchberg algebras.