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*Labelled Oriented Trees and the Whitehead Conjecture*

The Whitehead conjecture asks whether a subcomplex of an aspherical 2-complex is always aspherical. This question is open since 1941. Howie has shown that the existence of a finite counterexample implies (up to the Andrews-Curtis conjecture) the existence of a counterexample within the class of labelled oriented trees. Labelled oriented trees are algebraic generalisations of Wirtinger presentations of knot groups. In this talk we present several possibilities to show asphericity in the class of labelled oriented trees. There are many known classes of aspherical LOTs given by the weight test of Gersten, the I-test of Barmak/Minian, LOTs of Diameter 3 (Howie), LOTs of complexity two (Rosebrock) and several more.