

Hypergraphs and its compositional path algebras

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In this talk we define some algebras determined by directed hypergraphs, following some ideas of the construction of the path algebra of a quiver. Recall that hyperedges in an hypergraph relate n vertices through n -ary relations, for $n \geq 2$ in general. For this reason there are several ways in which compositions of hyperedges can be defined. In this work we propose some compositional operations that leads of course, to compositional paths. In some cases it is possible to identify the whole set of compositional paths obtained with the generators of some well-known algebras.

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