1111-55-48 **Martin Raussen*** (raussen@math.aau.dk), Fredrik Bajers Vej 7G, 9220 Aalborg, Denmark.

Combinatorial and topological models for spaces of schedules.

Higher Dimensional Automata are topological models for concurrent computation in the form of cubical complexes. A schedule gives rise to a directed path (d-path), and d-homotopies (preserving the directions) of such d-paths leave the results of computations invariant.

I shall describe and discuss several models for the homotopy type of the space of traces (schedules up to reparametrization) for particularly simple HDAs: as a prodsimplicial complex – with products of simplices as building blocks – and as a configuration space living in a product of simplices. In favourable cases, these models allow calculations of homology groups and other topological invariants of the trace spaces.

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