Variadic Equational Matching

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In this talk, we present our recent results about matching in variadic equational theories. In particular, we have designed a sound and complete matching procedure for these theories, computing minimal set of solutions. In general, the procedure is not terminating, since some problems might have an infinite set of solutions. We have identified matching fragments for which the procedure stops and returns a minimal and complete set of solutions. We have also restricted the procedure to a variant of matching, where solutions are of a certain shape, and proved its termination and minimality.

This is a joint work with Temur Kutsia from the Research Institute for Symbolic Computation, Johannes Kepler University Linz, Austria.