MATTHEW MOORE, McMaster University

Dualizable congruence modular algebras have a cube term

An early result in the theory of Natural Dualities is that an algebra with a near unanimity (NU) term is dualizable. A converse to this is also true: if $\mathcal{V}(\mathbb{A})$ is congruence distributive and $\mathbb{A}$ is dualizable, then $\mathbb{A}$ has an NU term. An important generalization of the NU term for congruence distributive varieties is the cube term for congruence modular (CM) varieties, and it has been thought that a similar characterization of dualizability for algebras in a CM variety would also hold. We prove that if $\mathbb{A}$ omits tame congruence types 1 and 5 (all locally finite CM varieties omit these types) and is dualizable, then $\mathbb{A}$ has a cube term.