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Reductions between entangled constraint satisfaction problems

The constraint satisfaction problem (CSP) dichotomy theorem of Bulatov and Zhuk states that, for each constraint language over a finite domain, the corresponding CSP is either in P or NP-complete. CSP instances can be formulated as nonlocal games with entangled players in which one player receives a constraint and the other a variable. Building on MIP* = RE, recent work shows that many classically NP-complete CSPs become RE-hard, and hence undecidable, in this setting, while many classically tractable CSPs remain in P. Motivated by the search for an entangled CSP dichotomy, I will discuss recent work on reductions between entangled CSP languages and their role in transferring complexity results.