Topology is relevant (in discussing the complexity of $\omega$-categorical CSPs).

It is well-known that the complexity of the CSP of a finite structure $A$ is determined by its polymorphism clone $\text{Pol}(A)$. This universal algebraic approach resulted in the proofs of the dichotomy conjecture by Bulatov and Zhuk, showing that $\text{CSP}(A)$ is NP-complete if there is a minion homomorphism from $\text{Pol}(A)$ to the projection clone and in P otherwise.

In general, omega-categorical structures are the biggest class where the universal algebraic approach is applicable. However then also the topology on $\text{Pol}(A)$ is relevant, as NP-hardness of $\text{CSP}(A)$ follows from uniformly continuous minion homomorphism to the projection clone. And by a result of Bodirsky, Mottet, Olšák, Opršal, Pinsker and Willard, there is an omega-categorical structure $A$, such that $\text{Pol}(A)$ has a minion homomorphism to the projections, but no uniformly continuous one.

However their example required an infinite signature. In this talk I would like to discuss the construction of such $A$ in finite relational language. In particular, this allows a discussion of the complexity of the resulting CSPs. As it turns out, we can obtain such $A$ with coNP-complete, k-EXP-time and undecidable CSPs.

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