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*Some logical aspects of hyperrigidity and  $C^*$ -envelopes of operator systems*

Hyperrigidity and the  $C^*$ -envelope of an operator system provide an interesting interplay between operator systems and the theory of  $C^*$ -algebras. In this talk we look at these properties from two contrasting viewpoints. On the one hand, we show that both hyperrigidity and  $C^*$ -envelopes reflect to separable substructures in the sense of Farah. On the other hand, we show that hyperrigidity and  $C^*$ -envelopes are badly behaved with respect to elementary equivalence. In particular, we find a sequence of hyperrigid operator systems whose ultraproduct is not hyperrigid and we find operator systems which are elementarily equivalent but whose  $C^*$ -envelopes are not elementarily equivalent.