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Undecidability and embedding problems in continuous logic

In their recent work, MIP*=RE, Ji et al use quantum complexity theory to resolve the Connes embedding problem. Together with Isaac Goldbring, we realized that this also showed that the universal theory of certain II_1 factors (particular von Neumann algebras) had undecidable continuous universal theories. There was a certain Gödelian aspect to the proof which I will highlight in this talk. This technique applies to other embedding problems and I will give some examples.