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Supersymmetry and Computational Complexity

Tuesday, 24 August 2021 17:00 (30 minutes)

I will discuss various aspects of supersymmetric systems from the point of view of the theory of computational complexity. These include the claim that computing the Witten index of $N=2$ quantum mechanics is $\#P$ -complete and thus intractable. I will also discuss the complexity of finding supersymmetric ground states of local SUSY Hamiltonians and its implications for the problem of computing certain cohomology groups.

Primary author: Dr CRICHIGNO, Marcos (Imperial College London)

Co-author: Dr CADE, Chris

Presenter: Dr CRICHIGNO, Marcos (Imperial College London)

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