

Physics Theory Seminar

Monday, September 25, 2017 / Pupin Hall Theory Center, 8th Floor / 2:10 PM

"Topological sectors, supersymmetric localization, and holography"

Correlation functions are interesting observables in quantum field theory that are very hard to compute away from perturbative expansions. I will describe recent work where, in supersymmetric theories, exact computations of such observables are possible using the technique of supersymmetric localization. I will focus on three-dimensional superconformal field theories (SCFTs) with $\mathcal{N} = 4$ supersymmetry, where the operators I study form a one-dimensional topological sector. In the special case of 3d SCFTs with AdS₄ holographic duals, I will describe the bulk duals of the corresponding topological sectors. This yields instances of a 2d/1d holographic duality where the bulk theories are weakly coupled and the boundary theories are exactly solvable.



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