

## Physics Theory Seminar

Monday, January 22, 2018 / Pupin Hall Theory Center, 8<sup>th</sup> Floor / 2:10 PM

### "The strong CP problem and UV instantons"

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The absence of sizeable CP violation in the strong sector is a long standing puzzle. A class of solutions to this problem rely on a global  $U(1)$  symmetry that is anomalous with QCD. These solutions lead to robust low-energy predictions, for example a massless up quark or a light axion. I will present simple extensions to such solutions which can dramatically change these low-energy predictions. In our models, contributions from small instantons play a significant role in affecting the low-energy physics while preserving the solution to the strong CP problem.

