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Bootstrapping Cosmological Correlations

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Cosmology is famously an observational rather than an experimental science. No experimentalists were present in the early universe, and the birth and subsequent evolution of the universe cannot be repeated. Instead, we can only measure the spatial correlations between cosmological structures at late times. A central challenge of modern cosmology is to construct a consistent "history" of the universe that explains these correlations. In the last few years, a new bootstrap approach was developed to understand this history using physical consistency conditions alone. In this talk, I will describe the basic idea behind this "cosmological bootstrap" and explain why it promises new insights into the physics of the very early universe.

Presenter: BAUMANN, Daniel

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