

## Vulcano Workshop 2014 - Frontier Objects in Astrophysics and Particle Physics



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### **Digging out Dark Energy properties from the Large Scale Structure of the Universe**

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After the tremendous success of the CMB measurements, the next frontier of precision cosmology is the study of the Large Scale Structure of the Universe, by means of present and future large galaxy surveys. I will discuss the potential of these observations for the extraction of information relevant for fundamental physics, such as the properties of Dark Energy and of neutrinos. Compared to the CMB, the main difficulty here is to deal with the various sources of nonlinearities of the density field. I will briefly illustrate how tools from field theory can be successfully applied to these problems.

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