

The difficulty of building metastable vacua in string theory has led some to conjecture that, in the string theory landscape, potentials satisfy $|\nabla V/V| \geq c \sim \mathcal{O}(1)$. This condition, which is supported by different explicit constructions, suggests that the EFTs which lead to metastable de-Sitter vacua belong to what is dubbed as swampland. This condition endangers the paradigm of single field inflation, as the potentials consistent that avoid the swampland criteria produce too much gravitational B-modes. However the predictions of inflation are dependent on the initial conditions for perturbations. In this talk, first, I will show how in some theories like the Extended Effective Field Theory of Inflation, one is forced to assume the excited initial conditions to obtain finite results for the observables like the power spectrum. Back to the topic, in the second part of my talk, I will show how scalar excited initial states cannot rescue single field inflation from the swampland, as they produce large local scalar non-gaussianity, which is in conflict with the Planck upper bound. Instead, we demonstrate that one can salvage single field inflation using excited initial states for tensor perturbations, which in this case produce only large flattened non-gaussianity in the tensor bispectrum. I also comment on the possible methods one can prepare such excited initial conditions for the tensor perturbations.