



Contribution ID: 284

Type: **not specified**

## Dynamical systems and analytic cosmological bounds

*Tuesday, June 18, 2024 3:00 PM (1 hour)*

Any scalar FLRW-cosmology with multi-field multi-exponential potentials exhibits a universal late-time bound on cosmic acceleration, which we prove analytically. We discuss the conditions under which scaling solutions are inevitable late-time attractors for this class of theories. Without the need to find explicit solutions to the cosmological equations, we are also able to identify bounds in the additional presence of fields with exponential kinetic couplings. We can further see how the contraction rate of cosmologies with negative potentials can be bounded by similar methods as those for cosmic acceleration. These results endow us with strong analytic tools to discuss cosmological backgrounds that appear, for instance, in some asymptotic corners of string compactifications.

**Presenter:** TONIONI, Flavio (KU Leuven)