

N-body simulations of primordial dark matter halos

Joan Bachs-Esteban
PhD Student

Instituto Superior Técnico - CENTRA

10th IDPASC School – 6th September 2021

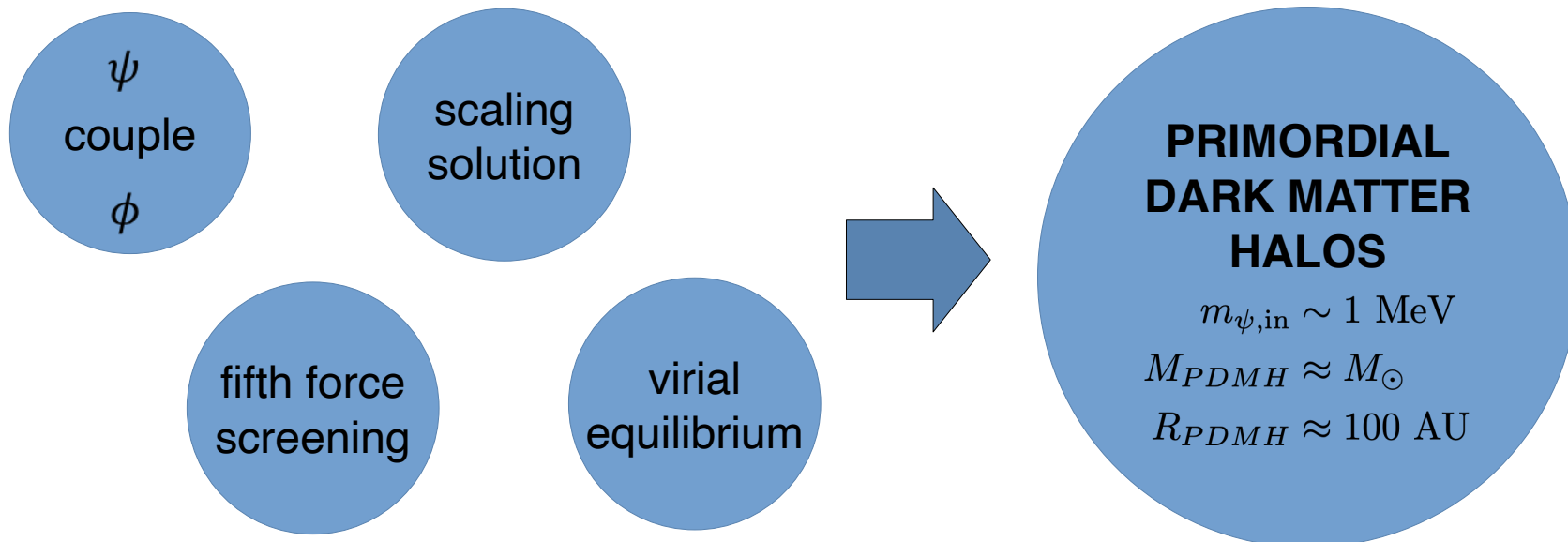
FCT Fundação
para a Ciência
e a Tecnologia



 **IDPASC**

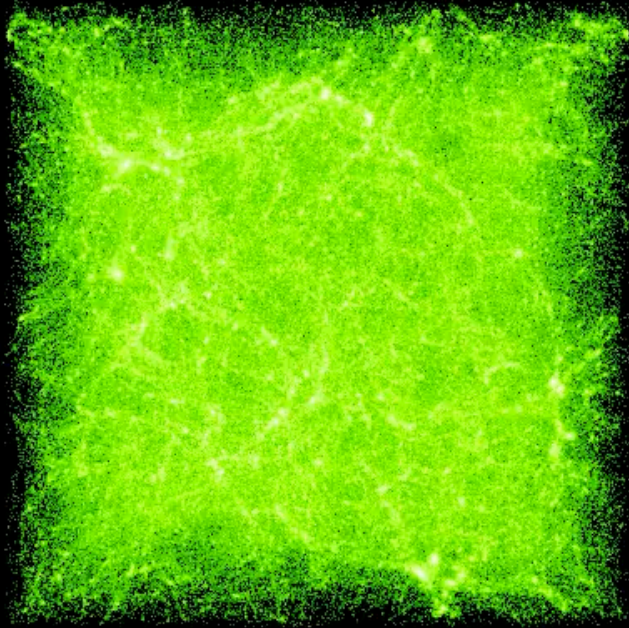
Fifth force interactions in the Early Universe

Scalar field ϕ	Fermion ψ
<ul style="list-style-type: none">•Light field to carry a long-range force•Plausible dynamical dark energy•Attractive force stronger than gravity	<ul style="list-style-type: none">•Beyond the Standard Model particle•Dark matter particle•Massive to be cold in RDE



Cosmological simulations with GADGET-2

Lambda-CDM



GNQ

