



Contribution ID: 65

Type: **not specified**

## Self-Organised Localisation

*Tuesday 22 June 2021 15:00 (1 hour)*

We describe a new phenomenon in quantum cosmology: self-organised localisation. When the fundamental parameters of a theory are functions of a scalar field subject to large fluctuations during inflation, quantum phase transitions can act as dynamical attractors. As a result, the theory parameters are probabilistically localised around the critical value and the Universe finds itself at the edge of a phase transition. We illustrate how self-organised localisation could account for the observed near-criticality of the Higgs self-coupling, the naturalness of the Higgs mass, or the smallness of the cosmological constant.

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