Contribution ID: **93**   Type: **Oral presentation**

A new approach to the thermodynamics of scalar-tensor gravity

We discuss a new approach to the thermodynamics of scalar-tensor gravity and to its possible diffusion" toward general relativity, seen as anequilibrium state" in a space of theories. This new approach echoes ideas from the thermodynamics of spacetime, but it is different. The main idea consists of describing scalar-tensor gravity as an effective dissipative fluid and applying constitutive relations from Eckart's first order thermodynamics to it. This procedure gives explicit effective quantities: heat current density, "temperature of gravity", viscosity coefficients, entropy density, plus an equation describing the "diffusion"to Einstein gravity. These quantities, otherwise missing in spacetime thermodynamics, pop out with minimal assumptions.

Primary author: FARAONI, Valerio (Bishop's University)

Presenter: FARAONI, Valerio (Bishop's University)