

# Special LMU Astrophysics Colloquium

11AM, Wednesday 24. May 2023, *Die große Aula der LMU*  
Geschwister-Scholl-Platz 1, Munich

## Prof. Dr. Harald Lesch

will present a colloquium on:



## The Universe – From Being to Becoming

### Abstract:

This talk will be a tour de force through the history of nature – from the beginning of the Universe until today. It will be a tour de force along one line, namely the major property of all natural systems, they become unstable and drive irreversible changes when they reach energetical limits. They organize themselves by critical processes, exceeding stability criteria.

The talk will deal with primordial density fluctuations and external gravitational and thermodynamical influences on boundary and initial conditions, the role of different surfaces, gradients, turbulence and other complex sources of free energy which drive changes in structures on all scales. It will emphasize the importance and limitations of the ideal mathematical description of complexity and illuminate the very special role of boundary conditions by serving with the facts. The facts are the central information about what has happened and what is real and they show how important instabilities are, because they create the structures in the Universe from galaxies to stars and planets, from planets to life and mind, from mind to science and responsibility.

Finally, we will end up with the suggestion to found a new faculty on universities: Faculty for tipping points and transformation studies in nature and society. Interdisciplinarity is more important than ever and if we don't do it at the universities, where else?

Please note special location in the LMU main building!