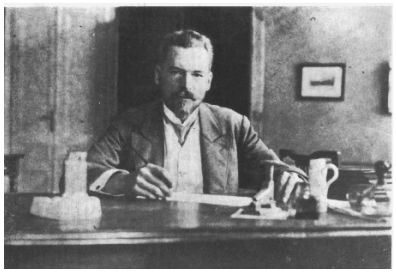

Contribution ID: **24** Type: **Regular Talk**

Numerical simulation of Kibble-Zurek mechanism with Landau-Ginzburg dynamics

Monday, September 25, 2023 9:40 AM (25 minutes)

The Kibble-Zurek mechanism (KZM) is a theoretical framework that describes the dynamics of non-equilibrium processes and defect formation in systems undergoing second-order phase transitions.
This mechanism finds widespread application in various fields, including cosmology and condensed matter physics.
I will explore the numerical simulation of KZM using Landau-Ginzburg dynamics and its potential applications in superconducting phase transitions involving intrinsic fluctuating magnetic fields and the miscible-immiscible phase transition of Bose-Einstein condensates.

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