



Contribution ID: 170

Type: **Presentation**

An Equilibrium Perspective on the Mechanical Properties of Active networks

The understanding of mechanical properties of active polymer networks can provide insights on the functioning of a range of biological materials. In this paper we first present a simple model for a network of two flexible polymer filaments connected by a molecular motor cluster and the network ideas are further extend to a multi stranded network. We learn that active network components lead to internal stresses which ultimately lead to network contraction.

Primary author: Mr MATEYISI, Mohau (Institute of Theoretical Physics, Department of physics, University of Stellenbosch))

Co-authors: Prof. K. MÜLLER-NEDEBOCK, Kristian (Institute of Theoretical Physics, Department of physics, University of Stellenbosch); Mr BOONZAAIER, Leandro (Institute of Theoretical Physics, Department of physics, University of Stellenbosch)

Presenter: Mr MATEYISI, Mohau (Institute of Theoretical Physics, Department of physics, University of Stellenbosch))

Track Classification: Track G - Theoretical and Computational Physics