



Contribution ID: 16

Type: **Talk**

## **Deciphering a smart material –a new method to measure actin cortex mechanics and mechanosensitivity**

*Saturday, November 26, 2022 2:00 PM (45 minutes)*

The actin cortex is a thin polymer network beneath the plasma membrane in animal cells. It acts as a mechanical shield of the cell and as a major regulator of cell shape and cell migration. The actin cortex is a complex material with time-dependent viscoelastic mechanical properties. It is further subject to a self-generated active contractile stress and to constituent turnover. I will discuss our measurement results on frequency-dependent cortical viscoelasticity measured by atomic force microscopy. In addition, I will discuss how mechanosensitivity of molecular bonds can affect molecular composition of the cortex and how this mechanosensitivity can be quantified in live cells.

### **Category**

Other

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**Session Classification:** Keynote Physics Talks 4

**Track Classification:** Physics talks