

# Bihyperbolicity and inflationary magnetogenesis

Marcus Werner  
Yukawa Institute for Theoretical Physics  
Kyoto, Japan

Modified theories of gravity play an important role in cosmology. In this talk, I describe a new constructive approach that allows the derivation (rather than stipulation) of gravity actions. These theories are constructed to have well-posed causality properties, which are built in by utilizing the notion of bihyperbolicity. Then I will discuss current work with Alex Vikman, regarding the implications of this idea for the problem of inflationary magnetogenesis.