

# Towards a robust estimate for gravitational leptogenesis

*Wednesday, 24 June 2020 13:00 (1 hour)*

**Zoom meeting:** <https://cern.zoom.us/j/7930190483> (password: see email)

**Format:** 40 minutes talk + 20 min discussion

**Virtual Axion Institute:** The discussion on this talk can be continued in Kohei's virtual guest office. <https://mattermost.web.cern.ch/axions/channels/kohei-kamada>

**Abstract:** In axion inflation, we can consider the anomalous coupling between the axion and gravity through the Chern-Simons term, which can generate chiral gravitational waves. Lepton asymmetry is also produced via the gravitational chiral anomaly at the same time, with which we can expect for the explanation of the present matter-anti matter asymmetry of the Universe. However, there still remain unclear issues in this model, such as the ghost-like degree of freedom and the UV divergences. In this talk, I will explain these issues in depth and determine with which conditions the present baryon asymmetry is explained.

**Presenter:** KAMADA, Kohei (Research Center for the Early Universe, University of Tokyo)

**Session Classification:** Baryogenesis