Linear Instability of Lovelock Black Holes

Tomohiro TAKAHASHI and Jiro Soda
(Kyoto University)

References: TT and J. Soda, arXiv: 1008.1385

TT and J. Soda, arXiv: 1008.1618

- We examine stability of Lovelock black holes in all dimensions.

- We construct master equations for all type perturbations.

- Using master equations, we can show that

  - BHs are **unstable** under tensor type perturbation in even dimensions and under scalar perturbation in odd dimensions.

  - BHs are **stable** under vector type perturbation in all dimensions.

Our poster is presented at No. 71