

Fixed Point Structure of Gradient Flow Exact Renormalization Group

Wednesday, 8 December 2021 16:20 (20 minutes)

Gradient Flow Exact Renormalization Group (GFERG) is a framework of Exact Renormalization Group and defines the Wilson action via Gradient Flow equation. We study the fixed point structure of the GFERG equation associated with the general Gradient Flow equation for scalar fields and show that it is almost the same as that of the Wilson-Polchinski (WP) equation. Furthermore, we discuss that the GFERG equation has a similar RG flow structure around a fixed point to the WP equation. We illustrate these results with $O(N)$ non-linear sigma model in 4-epsilon dimensions and the Wilson-Fisher fixed point.

Presenter: Mr HARUNA, Junichi (Kyoto University)

Session Classification: Short talk