THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PDE

Finite energy solutions to the 6D Fujita equation in the Sobolev critical case

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Abstract

We discuss the dynamics near the ground states for the 6D Fujita equation. This result presents a 6D version of the classification in a higher dimensional setting, obtained by Charles Collot - Frank Merle - Pierre Raphael (2017). In contrast to their results (they assume only that $u_0 \in \dot{H}^1(R^n)$), our result requires the additional integrability conditions on the initial data $u_0 \in L^2(R^n)$. We also point out that the assumption $u_0 \in \dot{H}^1(R^n)$ alone is not sufficient for the stabilization of the solution in the case $n = 6$.

Date: 8 May 2025 (Thursday)

Time: 4:00pm

Zoom Meeting: https://hkust.zoom.us/j/97692499717 (Passcode: 816427)

All are Welcome!