香港中文大學 The Chinese University of Hong Kong

香 港 大 學 THE UNIVERSITY OF HONG KONG

FIRST IN CHANGE

Analysis and PDE Seminar

Professor Beomjun Choi
Department of Mathematics, Pohang University of Science and Technology

TITLE: Thom's gradient conjecture for gradient systems

Date : May 22nd, 2024 (Wednesday)
Time : 10am-11am (Hong Kong time)
11am-12noon (Korea time)

Link to ZOOM : https://cuhk.zoom.us/j/99008163597
Meeting ID : 990 0816 3597
Password : 219834

Abstract. The analysis of the limiting behavior of gradient flows is pivotal in geometric analysis, PDEs and application in optimization. Rene Thom conjectured that, for a given convergent trajectory of a gradient flow of an analytic function, the secant direction of the trajectory to its limit also converges. This represents a higher-order question following the seminal works by Lojasiewicz and L. Simon. Thom's conjecture was affirmatively proved by Kurdyka, Mostowski, and Parusinski for gradient flows. In this talk, we discuss a generalization of this to the class of PDEs, including the mean curvature flow, Yamaha flow, and Ricci flow. Our results reveal the rate and direction of convergence to the limit. This is a joint work with Pei-Ken Hung at UIUC.

All are welcome

This is a joint activity organized by Department of Mathematics, The Chinese University of Hong Kong, Hong Kong; Department of Mathematics, Institute of Mathematical Research, Research Division of Mathematical and Statistical Science, The University of Hong Kong, Hong Kong; and Department of Mathematical Sciences, Ulsan National Institute of Science and Technology, Korea. More details can be found in https://hkumath.hku.hk/~imr/event/CUHK_HKU_UNIST_Analysis_and_PDE/index.php.