



Analysis and PDE Seminar

Dr. Yuning Liu

Institute of Mathematical Sciences,
New York University Shanghai

TITLE: Sharp interface limits of scalar and vectorial Allen-Cahn equations

Date : June 22nd, 2022 (Wednesday)

Time : 10am-11am (Hong Kong time)

11am-12noon (Korea time)

Link to ZOOM : <https://unist-kr.zoom.us/j/3170659442>

Meeting ID : 317 065 9442

Password : APDE21



Abstract. The Allen-Cahn type equations are widely adopted in the description of the evolution of interfaces in continuum mechanics. In this talk we shall first discuss the relative entropy method for the convergence of the scalar time-dependent Allen-Cahn equation to the mean curvature flow. The superiority of such a method is that it can derive equal-partition of the Allen-Cahn energy without Modica-Ilmanen type maximum principle. Then we shall discuss the generalizations of such a method to the vectorial cases.

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.

