



Department of Mathematics
The Institute of Mathematical Sciences
The Chinese University of Hong Kong

數學系
數學科學研究所
香港中文大學

Phone: (852) 3943 7988 / 3943 7989 • Fax: (852) 2603 5154 • Email: dept@math.cuhk.edu.hk
Phone: (852) 3943 8036 / 3943 8038 • Fax: (852) 3942 1020 • Email: ims@ims.cuhk.edu.hk
Rm. 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong
Unit 601, Academic Building No. 1, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

Joint Colloquium

Finite Morse index implies finite ends

Professor Jun-cheng Wei
Department of Mathematics
University of British Columbia

Abstract

We prove that finite Morse index solutions for Allen-Cahn in \mathbb{R}^2 are finite-ended. Our proof relies on curvature decaying estimates. The key is to analyze clustered interfaces using Toda system. As a result, some classification of finite Morse index solutions in \mathbb{R}^2 or \mathbb{R}^3 can be obtained. (This is a joint work with Kelei Wang)

Date:	31 July 2018 (Tuesday)
Venue:	Room 222, Lady Shaw Building, The Chinese University of Hong Kong, Shatin
Time:	3:30 p.m. – 4:30 p.m.

Professor Jun-cheng Wei is currently the Canada Research Chair (Tier I) in Nonlinear Partial Differential Equations and Professor of Mathematics in Department of Mathematics, University of British Columbia. Professor Wei was an invited speaker of International Congress of Mathematicians (2014), Croucher Senior Fellow (2005-2006), and Cheung Kong Chair Professor (awarded by Ministry of Education of China). Professor Wei was the recipient of Morningside Silver Medal (2010) and the First-Class Award of Natural Science (2010, Ministry of Education of China).

All are Welcome!