



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 • Fax: (852) 2603 5154 • Email: [dept@math.cuhk.edu.hk](mailto:dept@math.cuhk.edu.hk) (Math. Dept.)  
Room 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

# Joint Geometric Analysis Seminar

(Part of MIST program)

## *A Brakke type regularity for the parabolic Allen-Cahn equation*

*Dr. Shengwen Wang*  
*University of Warwick*

### Abstract

We will talk about an analogue of the Brakke's local regularity theorem for the  $\varepsilon$  parabolic Allen-Cahn equation. In particular, we show uniform  $C^{2,\alpha}$  regularity for the transition layers converging to smooth mean curvature flows as  $\varepsilon$  tends to 0 under the almost unit-density assumption. This can be viewed as a diffused version of the Brakke regularity for the limit mean curvature flow. This is joint work with Huy Nguyen.

Date: 5 November 2021 (Friday)  
Time: 3:00pm – 4:00pm (Hong Kong time)  
ZOOM link: <https://cuhk.zoom.us/j/91805734715>

*All are Welcome*