



Analysis and PDE Seminar

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TITLE: Global existence of smectic liquid crystal flows in dimension two

Date : Mar 21st, 2024 (Thursday) Time : 2pm-3pm (Hong Kong time) 3pm-4pm (Korea time) Link to ZOOM : https://cuhk.zoom.us/j/99008163597 Meeting ID : 990 0816 3597 Password : 219834

Abstract. In this talk, we discuss smectic liquid crystal flows in dimension two. In the nematic phase of a liquid crystal, the molecules tend to align along a preferred direction, and when lowering the temperature, the smectic phase occurs. In the simplified de Gennes model, smectic liquid crystal flows can be described by a coupled system of a harmonic map heat flow and a Ginzburg-Landau equation. Using the de Gennes model, we study global solutions to smectic liquid crystal flows.



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.

