



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PURE MATHEMATICS

Ricci flow on manifolds with boundary

by

Mr. Aaron Tsz-Kiu CHOW

Columbia University

Abstract

We study the Ricci flow on manifolds with boundary. In the first part, we prove short-time existence and uniqueness of the solution, in which the boundary becomes instantaneously umbilic for positive time. In the second part, we prove that the flow we constructed preserves natural boundary conditions. More specifically, if the initial metric has a convex boundary, then the flow preserves positive curvature operator and the PIC1, PIC2 conditions. Moreover, if the initial metric has a two-convex boundary, then the flow preserves the PIC condition.

Date : 28 December 2020 (Monday)

Time : 4:00pm – 5:00pm

Zoom Meeting : <https://hkust.zoom.us/j/3142721729>

All are Welcome!