



复旦大学数学科学学院 数学综合报告会

报告题目: Interface Dynamics in a Two-phase Tumor Growth Model

报告人: 童嘉骏 Assistant Adjunct Professor (University of California, Los Angeles)

时间: 2020-12-02 星期三 13:00-14:00

地点: Zoom会议号:62393125566, 密码:123456

报告摘要:

We study a two-phase tumor growth model in two space dimensions, where proliferation of the tumor cells leads to expansion of the tumor domain and migration of surrounding normal cells into the exterior vacuum. Instead of considering evolution of cell densities, our focus will be on the dynamics of two moving interfaces in the model that separate the tumor, the normal tissue, and the exterior vacuum. We will discuss well-posedness results on the interface evolution starting from a nearly radial initial configuration, under an assumption which is in line with the well-known Saffman-Taylor condition in viscous fingering. We will briefly discuss possible ill-posedness scenarios when these conditions are violated, as well as implications of our results on further analysis of the tumor growth models. This is joint work with Inwon Kim.

非线性数学模型与方法教育部重点实验室
中法应用数学国际联合实验室
上海市现代应用数学重点实验室
复旦大学数学研究所