

Front speed bending and flame quenching in G-equation models

Yu-Yu Liu

National Cheng Kung University

yuyul@mail.ncku.edu.tw

Abstract:

G-equations are well-known front propagation models in combustion theory. By level set formulation, G- equations are Hamilton-Jacobi type PDEs. Various nonlinear effects, including strain rate, curvature or diffusion, may be also built into the basic model. While the cellular flow enhances the front speed, we wonder how these nonlinear effects play the role in front speed bending or flame quenching.