

Parabolic Equations with No Boundary Conditions

Benjamin Weinkove

Department of Mathematics Northwestern University, USA

Email: weinkove@math.northwestern.edu

I will discuss the existence of smooth solutions of (degenerate) parabolic equations with no boundary conditions. In the linear setting I will describe a result of Kohn-Nirenberg type and show how it can be applied to prove smooth short time existence results for nonlinear equations including the porous medium equation, the p -Laplacian evolution equation and the Gauss curvature flow with a flat side. This is joint work with Albert Chau.