

Well-posedness of solutions for nonlinear heat equations and Navier-Stokes equations in modulation spaces

Tsukasa Iwabuchi

Abstract. The Cauchy problems for nonlinear heat equations and Navier-Stokes equations are studied in modulation spaces $M_{q,\sigma}^0(\mathbb{R}^n)$. Our aim is to reveal the conditions of q and σ of $M_{q,\sigma}^0(\mathbb{R}^n)$ for the existence of local and global solutions for initial data $u_0 \in M_{q,\sigma}^0(\mathbb{R}^n)$.