On the global existence or blowup of weak solutions to the semilinear wave equations with time-dependent dissipation

Professor Huicheng YIN
Nanjing University

In this talk, we are concerned with the global existence or blowup of weak solutions to the n-dimensional semilinear wave equation with time-dependent scale-invariant damping. This equation can be transformed into the semilinear generalized Tricomi equation. Through determining the critical exponent $p_{crit} > 1$ and the conformal exponent $p_{conf} > p_{crit}$, and establishing the time-weighted Strichartz inequalities, the corresponding global existence or blowup results are obtained. This is a joint work with Dr. He Daoyin and Li Qianqian.