1024-35-81 **Shijun Zheng*** (`shijun@math.sc.edu`), Department of Mathematics, University of South Carolina, Columbia, SC 29208. *Time decay of quantum waves on Riemannian manifolds: Recent development.* Preliminary report.

It is a quest to understand the behavior of waves or particles traveling in a quantum-mechanical background. We give a survey on some aspects of recent development concerning the decay of solutions to dispersive equations on Euclidean spaces and Riemannian manifolds. The problems and techniques are mainly from harmonic analysis and PDE. We will observe that the spectral multiplier theorem, Strichartz estimates and restriction phenomenon occur on manifolds as well as p-adic number fields. (Received December 30, 2006)