1078-53-173   **Yu Zheng*** (`zhyu@math.ecnu.edu.cn`), 500 Dongchuan Road, Mathematics Department, East China Normal University, Shanghai, Shanghai 200241, Peoples Rep of China. *On the study of eigenvalue problems along the geometrical evolution equations.*

In this talk, we will introduced our recent works on the eigenvalue problems along the geometrical evolution equations. It will include the monotonicity related with the first eigenvalue along the Ricci flow, the local Lipschitz continuity of the first eigenvalue and the applications on Yamabe invariant along the general geometric flow. At last we will introduce one convexity invariance of the curvature operator and its applications along the Ricci flow. (Received December 05, 2011)