1147-53-166   **Boris Botvinnik** and **Peng Lu*** (`penglu@uoregon.edu`). *Evolution of relative Yamabe constant under Ricci Flow.*

In a joint work with S.C. Chang in 2007 we derive, under a crucial technical assumption, a formula for the derivative of Yamabe constant $Y(g(t))$, where $g(t)$ is a solution of Ricci flow on closed manifolds.

In this talk we will present a joint work with B. Botvinnik to study the evolution of the relative Yamabe constants under Ricci flow on compact manifolds with boundary M. In particular, we show that if the initial metric $\bar{g}_0$ is a Yamabe metric, then, for Ricci flow $\bar{g}(t)$ with boundary conditions that mean curvature $H_{\bar{g}_t} = 0$ and conformal class $\bar{g}_t|_M \in [\bar{g}_0|_M]$, we prove that, under some natural assumptions, the time derivative of relative Yamabe constant is nonnegative and is equal to zero if and only the metric $\bar{g}_0$ is Einstein. (Received January 05, 2019)