

**Speaker:** Gang Li  
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Thursday, September 27, 2012  
2:00 pm  
258 Hurley Hall

**Title:** Constant  $Q$ -curvature metrics near the hyperbolic metric

**Abstract:**

A complete noncompact Riemannian manifold  $(M, g)$  with smooth boundary  $\partial M$  is called an asymptotically hyperbolic if there exists a smooth function  $\rho$  vanishing on  $\partial M$  such that  $\rho > 0$  in  $M$  and  $|\nabla \rho|_{\rho^2 g} = 1$  on  $\partial M$ . If moreover,  $g$  is also an Einstein metric, then we call  $(M, g)$  a Poincaré-Einstein manifold. For a Poincaré-Einstein manifold  $(M, g)$ , we show that there are infinitely many asymptotically hyperbolic metrics with constant  $Q$ -curvature in the conformal class of  $g$ .