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**Speaker:** Xumin Jiang  
University of Notre Dame

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229 Hayes-Healy Hall

**Title:** Boundary expansion for Singular Yamabe problem

**Abstract:**

I will take Singular Yamabe problem as an example to show how we construct boundary expansion for its solution. This expansion is on the distance function to the boundary, and since the solution is singular up to boundary, this expansion shows optimal regularity of the solution, and completely describes how a singular solution behaves near boundary. Similar expansion holds for minimal graphs in hyperbolic space, which is my recent joint work with Professor Qing Han, and a complex Monge-Ampere related to constructing Kahler-Einstein metric on pseudoconvex domain.