

# GEOMETRIC ANALYSIS SEMINAR

**“Boundary behaviour of solutions to singular elliptic equations”**

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Abstract: We study regularity and singularity profile of solutions to a number of singular elliptic equations arising in geometric and physical applications. By careful construction of barrier functions we establish the optimal regularity for these equations near the boundary. Beyond the optimal regularity we can furthermore express the solution as a combination of logarithm and power functions, which gives precise information on the singularity of the solution. Our work on singularity profile was inspired by that of Lee and Melrose on Fefferman's equation.

**Wednesday, May 11<sup>th</sup>, 2016  
MIT, Room 2-105  
Time: 4:00 PM**

