Colloquium

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ON A FOURTH-ORDER PDE AND APPLICATIONS TO PROBLEMS IN CONFORMAL GEOMETRY

Friday, September 14, 2018
3:00 p.m. in LC-25

ABSTRACT. In this talk, I will report the study of a 4-th order linear operator $P_4$ with leading symbol the bi-Laplace operator discovered by Paneitz in 1983. It turns out $P_4$ is a special case of the general class of GJMS operators with “conformal invariant” properties. I will report some recent progress on the study of $P_4$ and its associated curvature $Q_4$ on general $n$-dimensional manifolds with emphasis on the case when $n = 4$. I will also discuss some matching 3-rd order boundary operator of $P_4$ on manifolds with boundary and some geometric applications.