

*PDE, Complex Analysis
and Differential Geometry*



Speaker: Roland Roeder
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Tuesday, October 14, 2014

11:00 am

Room: 258 Hurley Hall

Title: Rational maps of \mathbf{P}^2 with equal dynamical degrees and no invariant foliation

Abstract:

Rational self maps of the complex projective plane are the simplest object considered in higher-dimensional holomorphic dynamics. To any such map R there are two (dynamical) degrees $\lambda_1(R)$ and $\lambda_2(R)$ which describe the rate of growth at which the map acts on curves and on points, respectively. When there is an inequality between λ_1 and λ_2 , the ergodic properties of R are pretty well understood. In the degenerate case $\lambda_1 = \lambda_2$, Guedj asked whether R must preserve a fibration. We show that this is not the case and we generate specific examples for which the ergodic properties are unknown.