

Speaker: Xianghong Gong
University of Wisconsin

Title: Differential inequalities of continuous functions and removing singularities of Rado type for J-holomorphic maps

Abstract: We will consider a continuous function f on a domain in \mathbf{C}^n satisfying the inequality that $|\bar{\partial}f|$ is bounded by $|f|$ off its zero set. The main conclusion is that the zero set of f is a complex variety. For $n = 1$, this is an easy consequence of Rado's theorem. The proof for higher dimension case is still based on Rado's theorem, but one needs to study carefully about the $\bar{\partial}$ -closedness of $(\bar{\partial}f)/f$ on the domain. The case for vector-valued f is largely open, except when the zero set of f is real analytic.

If time permits, we will also state a result about removing singularities of Rado type for continuous J-holomorphic curves. This is joint work with J.-P. Rosay