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Mei-Chi Shaw* (shaw.1@nd.edu) and **Christine Laurent-Thiebaut**. *Holomorphic approximation via Dolbeault cohomology*.

In this talk we study holomorphic approximation and approximation of $\bar{\partial}$ -closed forms in complex manifolds. The classical Runge theorem and the Mergelyan property are extended to domains in complex manifolds. We characterize the Runge or Mergelyan property in terms of certain Dolbeault cohomology groups and geometric conditions. Holomorphic approximation is also related naturally to the mixed boundary problems for $\bar{\partial}$ on annuli. (joint work with Christine Laurent-Thiébaud). (Received September 12, 2019)