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Bingyuan Liu*, One Brookings Dr., Saint Louis, MO 63130. *Characterization of the complex domains by their holomorphic automorphism groups.*

Using holomorphic automorphism of a domain Ω to characterize the property of Ω dates back the time of Cartan. This point of view was developed since 1970s by many people, like Bedford, Greene, Pinchuk, Kim, Krantz, Pinchuk, Rosay, Verma and Wong. Specifically, Greene-Krantz gave a theorem about the property of the orbit accumulation point. In this talk, we consider the question from the global view. We discuss, in \mathbb{C}^n , the (global) pseudoconvexity of the domain Ω after assuming some conditions on the behaviors of the automorphism groups. We will also introduce a new theorem of Wong-Rosay type theorem for Kahler manifolds. (Received September 01, 2014)