

# Global invariants of strictly pseudoconvex domains arising from renormalizations of Chern Classes

Kengo Hirachi

(University of Tokyo)

**Abstract:** Cheng and Yau proved that every strictly pseudoconvex domain admits a unique complete Einstein–Kähler metric. Using its Kähler form and curvature, one can construct characteristic forms that are biholomorphically invariant. However, the integrals of these forms diverge, and to obtain global biholomorphic invariants—equivalently, invariants of the CR structures on the boundaries—one must renormalize the integrals. In this talk, I will summarize the renormalization procedure developed by Burns–Epstein, T. Marugame, Y. Takeuchi, S. Matsumoto, Yang–Case, and myself, and then describe how these invariants vary under deformations of the domain.