Department of Mathematics
University of Notre Dame

GEOMETRIC ANALYSIS SEMINAR

Speaker: Ethan Addison
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Date: Thursday, December 12, 2019
Time: 11:00 AM
Location: 258 Hurley Hall

Lecture Title:
Bott-Chern Vanishing on Complete Hermitian Manifolds

Abstract
On a complex manifold, the double complex given by the Dolbeault operator and its conjugate gives rise to several quotient spaces which condense to a single datum on compact Kähler manifolds thanks to the dd^c-Lemma and Hodge theory. Outside of this particular context, though, they represent a measurement of manifold's lack of being Kähler. After introducing these so-called Bott-Chern and Aeppli cohomologies we present a proof of a recent vanishing result by Piovani-Tomassini for complete Hermitian manifolds for these spaces, inspired by similar work of Gromov for the complete Kähler case.

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