

1116-32-410

**severine biard\*** ([biards@math.tamu.edu](mailto:biards@math.tamu.edu)), Department of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77843-3368. *Nonexistence of smooth Levi-flat hypersurface with positive normal bundle in compact Kähler manifolds of dimension  $\geq 3$ .*

Among results of nonexistence of Levi-flat hypersurfaces in  $\mathbb{C}\mathbb{P}^n$ ,  $n \geq 2$ , conjectured by D. Cerveau in 1993, there are some generalizations to compact Kähler manifolds, particularly the conjecture given by Marco Brunella in 2008: there is no smooth Levi-flat hypersurface such that the normal bundle to the Levi foliation is positive along the leaves in compact Kähler manifolds of dimension  $\geq 3$ . In a joint work with Andrei Iordan, we obtained a positive answer to this conjecture by using  $L^2$ -weighted estimates for  $\bar{\partial}$ . (Received August 31, 2015)