1052-53-305   **Weiyi Zhang*** (`zhang393@math.umn.edu`), Department of Mathematics, 206 Church St SE, University of Minnesota, Minneapolis, MN 55455. *A new cohomology decomposition of almost complex 4-manifolds.*

In this talk, I will introduce a new cohomology decomposition of second cohomology group of almost complex 4-manifolds. This can be viewed as a generalization of (real) Dolbeault docomposition for complex manifolds. I will calculate and estimate ranks of the subgroups in some cases and explain the relations with comparison of some symplectic cones.

This is a joint work with Tedi Draghici and Tian-Jun Li. (Received August 31, 2009)

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