Meeting: 999, Nashville, Tennessee, SS 3A, Special Session on Index Theory and the Topology of Manifolds

999-57-121 **Christopher W. Seaton*** (`seatonc@rhodes.edu`), Dept. of Mathematics and Computer Science, 2000 N. Parkway, Memphis, TN 38112-1690. *A Complete Obstruction to the Existence of Nonvanishing Vector Fields on Almost-Complex, Closed Orbifolds.*

We determine several necessary and sufficient conditions for a closed almost-complex orbifold Q to admit a nonvanishing vector field. These conditions are stated separately in terms of the orbifold Euler-Satake characteristics of Q and the connected components of its twisted sectors, the Euler characteristics of the underlying topological spaces of Q and the components of its twisted sectors, and in terms of the orbifold Euler class $e_{orb}(Q)$ in Chen-Ruan orbifold cohomology $H^*_{orb}(Q;\mathbb{R})$. (Received August 17, 2004)

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