

Wayne State University
Mathematics Department Topology Seminar

Hodge filtered complex cobordism

Gereon Quick
Harvard University

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Abstract

We report on a joint project with Mike Hopkins and introduce Hodge filtered complex cobordism groups for complex manifolds. These groups combine integral topological and complex geometric information in analogy to differential cohomology groups for smooth manifolds. By taking the Hodge filtration into account these groups form a natural generalization of Deligne cohomology and become especially interesting for Kähler manifolds