HOPF-CYCLIC COHOMOLOGY

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Following the idea of an invariant differential complex, we construct general-type cyclic modules that provide the common denominator of known cyclic theories. The cyclicity of these modules is governed by Hopf-algebraic structures. We prove that the existence of a cyclic operator forces a modification of the Yetter-Drinfeld compatibility condition leading to the concept of a stable anti-Yetter-Drinfeld module. This module plays the role of the space of coefficients in the thus obtained cyclic cohomology of module algebras and coalgebras.