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Jon Belcher*, 4650 WHITE ROCK CIR APT 6, Boulder, CO 80301. *Bridge Cohomology*.

The connection between Hochschild and cyclic cohomologies with generalized De Rham homology and index theories for arbitrary algebras has long been established by the work of Connes, Karoubi, Loday, Feigin, Tsygan, et al. Here we generalize these cohomology theories even further, essentially creating a theory that establishes a step-wise bridge between the two. This theory can then be used to establish similar geometric results for manifolds with boundaries, and may have applications in exterior differential systems, as well as extend to higher K-theories. (Received July 13, 2018)