Mihai D Staic\* (mstaic@bgsu.edu), Bowling Green State University, Bowling Green, OH, and Bruce R Corrigan-Salter (brcs@wayne.edu), Wayne State University, Detroit, MI. Higher Order and Secondary Hochschild Cohomology.

Higher order Hochschild (co)homology is associated to a simplicial set X, a commutative algebra A and an A-bimodule M. When X is the standard simplicial set for the sphere  $S^1$ , one recovers the usual Hochschild cohomology. We give a generalization of Pirashvili's construction by replacing the simplicial set with a simplicial pair, and we show that the secondary Hochschild cohomology is a particular case of this new construction. (Received July 01, 2017)