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Gabe Angelini-Knoll* (gabriel.angelini-knoll@wayne.edu) and **Andrew Salch**. *Loday constructions in functor categories*.

The Loday construction in spectra produces interesting invariants such as topological Hochschild homology and its “higher order” variations. The construction is sufficiently general to be applied in the setting of general symmetric monoidal model categories satisfying mild assumptions. For example, the Loday construction can be defined for functor categories using the Day convolution symmetric monoidal product. I will describe how a specific case of this construction produces a spectral sequence in higher order topological Hochschild homology of a filtered commutative ring spectrum. New concrete calculations can be done by this method, for example, I compute topological Hochschild homology of the connective cover of the $K(1)$ -local sphere. (Received December 27, 2016)