1161-30-258 **Catherine Beneteau*** (cbenetea@usf.edu). *A survey of optimal polynomial approximants and connections to digital filters.* Preliminary report.

In the last few years, the notion of optimal polynomial approximant has appeared in the mathematics literature in connection with Hilbert spaces of analytic functions of one or more variables. In the 70s, researchers in engineering and applied mathematics introduced least squares inverses in the context of digital filters in signal processing. It turns out that in the Hardy space H^2 these objects are identical. In this talk, I will survey results related to zeros and convergence of optimal polynomial approximants and implications for the design of ideal digital filters. This talk is based on a survey paper that is joint with Ray Centner. (Received August 18, 2020)