

1145-VU-1385 **Jerzy Dydak** and **Thomas Weighill*** (tweighil@vols.utk.edu). *Three extension theorems: topological, uniform and large scale.*

We will present a unified proof of three different theorems of the form: a (certain type of) function from a subset of a (certain type of) space to the interval extends to that same kind of function over the whole space. The first such theorem is the classical Tietze Extension Theorem concerning bounded continuous functions which every topology student learns early on in their career. The second is the less well-known result of Katetov about uniformly continuous functions. The third is a new result of ours which generalizes a result of Dydak and Mitra about so-called slowly oscillating functions. Slowly oscillating functions are a subject of interest in the fairly new field of large scale geometry - the study of spaces as viewed from far away - and were introduced by Higson and Roe, motivated by their work in index theory. The unification of the proofs of these three results will be achieved via a more general extension theorem for a set equipped with a neighbourhood operator. (Received September 21, 2018)