1150-03-652 **Slawomir Solecki***, Department of Mathematics, Cornell University, Ithaca, NY 14853.
Topologies and descriptive set theory.

We introduce a notion of filtration from one topology σ to another τ assuming that τ contains σ. Such filtrations are certain transfinite sequence of topologies interpolating between σ and τ. We consider the question of whether a filtration succeeds in reaching τ, and, if it does, at what stage it happens. Answers to these questions involve descriptive set theoretic conditions on the relationship between the topologies σ and τ. This theme arose in investigations concerning the Scott analysis of certain definable equivalence relations. (Received July 16, 2019)