

Meeting: 1004, Bowling Green, Kentucky, SS 8A, Special Session on Topology, Convergence, and Order, in Honor of Darrell Kent

1004-54-25 **Sang-Ho Park*** (sanghop@nongae.gsnu.ac.kr), Department of Mathematics, Gyeongsang National University, 660-701 Chinju, South Korea, and **Darrell C. Kent** (dkent@wsu.edu), Department of Mathematics, Washington State University, Pullman, WA. *Relations Between Decomposition Series and Supratopological Series of Neighborhood Spaces.*

A convergence structure on a set X is a correspondence between the filters on X and the subsets of X which specifies which filters converge to which points. The decomposition series of a convergence structure q , introduced by Kent and Richardson in 1973, is a descending ordinal sequence of pretopologies terminating in the topological modification of q . In 1997, Wilde defined the topological series of a convergence structure, a different descending ordinal sequence of convergence structures which also terminates in the topological modification.

Neighborhood structures, which generalize supratopologies and pretopologies (but not convergence structures) were introduced recently by Kent and Min. In this paper, we investigate two ordinal sequences defined analogously for a neighborhood structure, both of which terminate in the supratopological modification of the given structure. (Received December 22, 2004)