

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

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Extensions and ultrafilters. Preliminary report.

We explore the relationship between groupings of non-convergent ultrafilters and extensions of various kinds. Any such collection of sets of non-convergent ultrafilters can be thought of as the trace system of a convergence-space extension. Conditions are given for which this collection is in fact the trace system of a topological extension. In addition, such a collection yields a T1 topological compactification, provided the original space is a T1 topological space. Finally, these results are applied to the Alexandroff and to the Stone-Cech compactifications. (Received January 17, 2005)