

Abstract for YSU Topology Seminar

17 March 2008, 4:00 pm

We examine the relationship between the localic product and the traditional topological and L -topological products.

1. The original paper of Dowker-Strauß [Houston J. Math. 3(1976), 7–15] has an enormous gap in their “proof” of the relationship between localic products of topologies and their traditional topological product based apparently on an easily made mistake. A proper proof shows this relationship to be decidedly non-straightforward and requires a number of tools. It is also interesting to note that a similar gap is in the treatment of this result in Johnstone [*Stone Spaces*, Cambridge, 1982], and in private correspondence he informed me that this would be addressed in a second printing (which has never appeared).
2. The relationship between localic products of L -topologies and their L -topological product is much more problematic than the traditional case. We will examine two or three attempts to generalize a correct proof of the traditional result. It is in this context that the notions of join-separation, sum-separation, weak sum-separation, product-separation, projection-separation, and normalization for families of L -topological spaces becomes relevant.