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Jennifer Anne Brown* (jennifer.brown@csuci.edu). *Pseudotrees under the interval topology*. Preliminary report.

A *tree* is a partially ordered set (T, \leq) such that the sets $T \downarrow t = \{r \in T : r \leq t\}$ are well-ordered. A *pseudo-tree* is a generalization of a tree: a partially ordered set (T, \leq) such that the sets $T \downarrow t$ are only required to be linearly ordered. Let T be a pseudotree with a single root r , and define a topology τ on T by taking as a base all sets of the form $(s, t]$ (where $s, t \in T$ and $s \leq t$), together with the singleton set $\{r\}$. This interval topology (or “tree topology”) has been well-studied in the case where T is in fact a tree. Permitting T to be merely a pseudotree means that many of the nice topological properties one finds in the case of the interval topology on trees no longer hold. For example, every tree is locally compact in the interval topology, but it is easy to construct a non-locally compact pseudotree. We examine to what extent some properties related to metrizability of trees with the interval topology hold in the case of pseudotrees. (Received September 17, 2008)