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### A Lexicographic Ordering on Simply-Connected, Non-Hausdorff 1-Manifolds

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*Washington University in St. Louis*

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A LEXICOGRAPHIC ORDERING ON  
SIMPLY-CONNECTED, NON-HAUSDORFF  
1-MANIFOLDS

*Kwok Hao Lee*

*Mentor: Rachel Roberts*

I begin an investigation of the extent to which the theory of group actions on the reals, as well as the theory of simplicial trees, can be extended to a theory of group actions on simply-connected, second countable, but not necessarily Hausdorff 1-manifolds. Such a theory would have implications in the theory of codimension 1 foliations. As a first step, I propose a lexicographic ordering on simply connected, non-Hausdorff 1-manifolds.