

“A counterexample exists showing that not every regular space is completely regular. It is formidable and we have relegated it to Exercise 18G, where most people won’t be bothered by it.”

— Stephen Willard

The Trivial Notions Seminar Proudly Announces

Separation Separation

A talk by
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Abstract

A separation axiom is any statement about a topological space X that states that, if A and B are disjoint subspaces of X (having some first property), then there is an open set (having some second property) containing A that does not meet B . By varying these two properties, we can define many subtly different separation axioms. One such sequence of axioms goes as follows, in decreasing order of strength:

$$\text{Binormality} > T_4 > T_{3\frac{1}{2}} > T_3 > T_2 > T_1 > T_0.$$

In this talk, we will define the axioms in this sequence and give examples that show the implications are irreversible. We will mostly focus on Arens’ example of a space that is T_3 but not $T_{3\frac{1}{2}}$ and on Rudin’s example of a space that is T_4 but not binormal.

Friday, October 26th, at 1:00 pm
Science Center 530