1163-03-1045 **Daniel Turetsky*** (dan.turetsky@vuw.ac.nz). *Relations between preservation properties.*
Preservation properties are a tool for separating the reverse mathematical strength of various statements. As an example, if I is a Turing ideal and X is a set outside I, then there is an ideal J containing I but omitting X and which models WKL_0. The same holds with RT^2_2 in place of WKL_0, but this fails for RT^3_2, thus showing that WKL_0 and RT^2_2 do not prove RT^3_2.

In fact, for both WKL_0 and RT^2_2, the above holds not just for a single set X, but for countably many sets simultaneously. In both cases, the proofs for one set and for countably many sets are more or less the same. It turns out there's a reason for this: any reverse mathematical principal (of the appropriate form) which can be satisfied while avoiding a single set can be satisfied while avoiding countably many.

This is an example of a relationship between preservation properties. We investigate similar relationships between various preservation properties. (Received September 14, 2020)