

# Some informal remarks on two different approaches to constructive topology: effective spaces and positive topologies

Giovanni Sambin

Some stimulus for reflection is offered on a rather broad research topic (and one that might be a suitable topic for a doctoral thesis or research project). The main difference between the two approaches mentioned in the title, that of effective spaces introduced by Ershov and studied mainly by Dieter Spreen and that of formal topology, later evolved into positive topology and developed mainly by myself, is the explicit presence or absence of the concept of computable function, as formalised in Turing machines or recursive functions. The interesting question is to which extent these two approaches are equivalent. This is not just a puzzle (in Kuhn's sense), that is, it is not just a technical problem, but requires reflection on the conceptual tools for connecting topology with computation.