1163-13-774 **Carmelo Antonio Finocchiaro*** (`cafinocchiaro@unict.it`), Department of Mathematics and Computer Scienc, Città Universitaria, viale Andrea Doria 6, 95125 Catania, Catania, Italy, and **Dario Spirito**. *Suprema in spectral spaces and applications.*

Let X be a spectral space. It is well known that the spectral topology of X can be refined to another topology, called the constructible (or patch) topology, which remains spectral and becomes Hausdorf. Being any spectral space X a T_0 space, a natural partial order on X can be defined by setting, for every $x, y \in X$, $x \leq y$ if $y \in \overline{\{x\}}$. We will provide conditions for a subset Y of the partially ordered set $(X, \leq)$ in order that the supremum of Y (in X) exists and belongs to the closure of Y in the constructible topology. Algebraic applications of such topological results will concern density properties of some spaces of rings and ideals. Moreover, we will provide topological characterizations of distinguished classes of domains, in terms of certain properties of their ideals. Joint paper with D. Spirito. (Received September 12, 2020)

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