b-convergences are presented for studying preuniform convergence spaces in the sense of Preuss (1993) and set-convergence spaces introduced by Wyler in 1989 from a common point of view. So, the well-known supertopologies as defined by Doitchinov in 1964 and also the filtermerotopies in the sense of Katetov (1965) can be integrated as well. Even, the grill-defined presupernear operators introduced by myself (1999), are contained in this commonly broaden concept!

Moreover, we will discuss all the properties for describing categories within the realm of Convenient Topology, especially the properties of being cartesian closed or extensional.

References