1004-18-107   **Josef Slapal*** (`slapal@fme.vutbr.cz`), Department of Mathematics, Brno University of
Technology, Technicka 2, 616 69 Brno, Czech Rep. *Convergence with respect to a closure operator.*
We introduce and study a concept of convergence on a concrete category $\mathcal{K}$ with respect to a closure operator c on $\mathcal{K}$. An approach utilizing generalized filters for expressing the convergence is used. We start with defining and investigating neighborhoods of subobjects of a given $\mathcal{K}$-object which are then used for introducing the convergence. Some basic properties of the convergence are discussed. In particular, we show that separation and compactness induced by the convergence behave analogously to the usual separation and compactness of topological spaces, and more decently than the known c-separation and c-compactness. An approach using certain generalized filters for expressing the convergence is also mentioned. (Received January 20, 2005)