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*-compactifications of quasi-uniform spaces

Miguel Angel Sanchez-Granero

University of Almeria

Area de Geometría y Topología. Universidad de Almería, Almeria, Spain

misanche@ual.es

By a *-compactification of a T_0 quasi-uniform space (X, \mathcal{U}) we mean a compact T_0 quasi-uniform space (Y, \mathcal{V}) that has a $\mathcal{T}(\mathcal{V} \vee \mathcal{V}^{-1})$ -dense subspace quasi-isomorphic to (X, \mathcal{U}) .

We prove that (X, \mathcal{U}) has a *-compactification if and only if its bicompletion $(\tilde{X}, \tilde{\mathcal{U}})$ is compact. We also show that, in this case, $(\tilde{X}, \tilde{\mathcal{U}})$ is the maximal *-compactification of (X, \mathcal{U}) and $(X \cup G(X), \tilde{\mathcal{U}}|_{X \cup G(X)})$ is its minimal *-compactification, where $G(X)$ is the set of all points of \tilde{X} which are $\mathcal{T}(\tilde{\mathcal{U}})$ -closed (we remark that we use as partial order of *-compactifications the inverse of the partial order used for T_2 compactifications of Tychonoff spaces).

(This is a joint work with S. Romaguera.)