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INVERSE LIMITS WITH UPPER SEMI-CONTINUOUS BONDING FUNCTIONS

W. T. INGRAM

Suppose $(D, \preceq)$ is a partially ordered set and X_α is a compact Hausdorff space for each α in D. Moreover, suppose that $f_{\alpha\,\beta}$ is an upper semi-continuous function from X_β into 2^{X_α} for each α and β in D such that $\alpha \preceq \beta$. The inverse limit of the system $\{X_\alpha, f_{\alpha\,\beta}, D\}$ is the subset of $\prod_{\alpha\in D} X_\alpha$ consisting of all points such that $x_\alpha \in f_{\alpha\,\beta}(x_\beta)$ for each α and β in D where $\alpha \preceq \beta$. We will discuss this type of inverse limit, give some examples, and discuss the contents of a book that we are close to completing that includes material on these general types of inverse limits.

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