



A Duality Between Non-Archimedean Uniform Spaces and Subdirect Powers of Full Clones

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A uniform space is said to be non-Archimedean if it is generated by equivalence relations. If λ is a cardinal, then a non-Archimedean uniform space (X, \mathcal{U}) is λ -totally bounded if each equivalence relation in \mathcal{U} partitions X into less than λ blocks. If A is an infinite set, then let $\Omega(A)$ be the algebra with universe A and where each $a \in A$ is a fundamental constant and every finitary function is a fundamental operation. We shall give a duality between complete non-Archimedean $|A|^{+}$ -totally bounded uniform spaces and subdirect powers of $\Omega(A)$. We shall apply this duality to characterize the algebras dual to supercomplete non-Archimedean uniform spaces.

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