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DEFINABILITY OF HEWITT SPACES BY THE LATTICES OF SUBALGEBRAS OF SEMIFIELDS OF CONTINUOUS POSITIVE FUNCTIONS WITH MAX-PLUS

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The lattice $\mathbb{A}(U^{\vee}(X))$ of subalgebras of the semifield $U^{\vee}(X)$ of all continuous positive functions defined on a topological space X is considered. A topological space is said to be a Hewitt space if it is homeomorphic to a closed subspace of a Tychonoff power of the real line $\mathbb{R}$. The main result of the paper is the proof of the fact that any Hewitt space X is determined by the lattice $\mathbb{A}(U^{\vee}(X))$.

Keywords: semifield of continuous functions, subalgebra, lattice of subalgebras, isomorphism, Hewitt space, max-addition.

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