

REAL AND p -ADIC REPRESENTATIONS OF COMMUTATIVE RINGS

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In 1940 M. Stone gave a completely algebraic characterization of the ring $C(X, \mathbb{R})$ of all \mathbb{R} -valued continuous functions on a compact space X , among the class of all commutative rings A containing \mathbb{Q} . Later this result was generalized to the “Real Representation Theorem” for commutative rings A with an archimedean pre-ordering. We shall present a similar development where the ring $C(X, \mathbb{R})$ is replaced by the ring $C(X, \mathbb{Q}_p)$ of all \mathbb{Q}_p -valued continuous functions on a compact space X .

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