

A TRIPLE OF INFINITE ITERATES OF THE FUNCTOR OF POSITIVELY HOMOGENEOUS FUNCTIONALS

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The present article is devoted to the study of the space $OH(X)$ of all weakly additive order-preserving normalized positively homogeneous functionals on a metric compactum X . We prove the uniform metrizability of the functor OH by means of the Kantorovich–Rubinshtein metric. We also show that the functor OH_+ is perfectly metrizable, where

$$OH_+(X) = \left\{ \mu \in OH(X) : |\mu(\varphi)| \leq \mu(|\varphi|), \varphi \in C(X) \right\}.$$

Under natural assumptions on X , we show that the triple

$$(\mathcal{F}^\omega(X), \mathcal{F}^{++}(X), \mathcal{F}^+(X))$$

is homeomorphic to $(Q, s, \text{rint } Q)$, where \mathcal{F} is a convex seminormal semi-monadic subfunctor of OH_+ .

Key words and phrases: weakly additive functional, Kantorovich–Rubinshtein metric, seminormal functor, perfectly metrizable functor, convex functor.

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