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A survey on topological properties of $P(K)$ spaces*

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To the memory of Jaś, *Kamil Duszenko (1986–2014)*
Ten years after

Abstract. Given a compact space K, we denote by $P(K)$ the space of all Radon probability measures on K, equipped with the *weak** topology inherited from $C(K)^*$. For nonmetrizable compacta K even basic properties of $P(K)$ spaces depend of additional axioms of set theory. We discuss here older and quite recent results on the subject.

Keywords and phrases: Radon measure, space of measures, Banach space of continuous functions, Boolean algebra, Stone space, independence results

Mathematics Subject Classification (2020): Primary 46E27, 28C15, 03E35; Secondary 46E15, 06E15

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