# SNELL'S OPTIMIZATION PROBLEM FOR SEQUENCES OF CONVEX COMPACT VALUED RANDOM SETS

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*Abstract:* A random set analogue of the Snell problem is presented. In the original Snell's problem one observes a sequence of random variables $(\xi_n)$, say a gambler's capital at successive games. If the gambler leaves the game at a random time $\nu$, his expected capital at this time is $E\xi_\nu$. The objective is to stop at time $\nu$ (using information available up to this moment) such that the expected gambler's fortune $E\xi_\nu$, is maximal.

Here a multivalued analogue of this problem will be studied. Given a Banach space and a sequence of convex weakly or strongly compact valued random sets $(Z_n)$ in that space, the existence of a stopping time $\nu$ such that $EZ_\nu$ is maximal is investigated.

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