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The Study of the Level Zero Crossing Time of a Semi-Markovian Random Walk With Delaying Screen

Tahir A. KHANIEV, İhsan ÜNVER

**Abstract:** In this study, a semi-Markovian random walk with delaying screen at  $(\beta > 0$  and the first crossing time  $(\gamma_1)$  of the zero level of this process are constructed. Furthermore, the distribution function with its Laplace transform, expected value and variance of random variable  $(\gamma_1)$  are calculated. In addition to these, a formula for the higher order moments of  $(\gamma_1)$  is given.

**Key Words:** Semi-Markovian random walk, reflecting and delaying screens.

 [Keywords](#)  
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[math@tubitak.gov.tr](mailto:math@tubitak.gov.tr)

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