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Point and non-point estimation methods of parameters of a multiple linear regression model based on Karush–Kuhn–Tucker conditions and maximum likelihood function: Case of random intervals

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Abstract. Random set theory is concerned with the development of a coherent mathematical framework for studying random objects whose realizations are sets, where the object of economic and statistical interest is a set rather than a point.

In this paper we discuss the random intervals which are random sets, and to use Karush–Kuhn–Tucker conditions and maximum likelihood Function for estimating the parameters of a multiple linear regression model, whose dependant variable is unobserved and belongs to a random interval.

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Keywords: Random set, random interval, maximum likelihood, multiple linear regression, ordinary least squares method

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