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## The orthogonality principle and conditional densities

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ABSTRACT. Let  $X, Y \in L^2(\Omega, K, P)$  be a pair of random variables, where  $L^2(\Omega, K, P)$  is the space of random variables with finite second moments. If we suppose that  $X$  is an observable random variable but  $Y$  is not, than we wish to estimate the unobservable component  $Y$  from the knowledge of observations of  $X$ . In this paper, using some definitions and properties of the estimators we shall present some results relative to the mean-square estimation.

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