

ON A GENERAL KAC-RICE FORMULA FOR THE MEASURE OF A LEVEL SET

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Let $X(\cdot)$ be a random field from \mathbb{R}^D to \mathbb{R}^d , $D \geq d$. In this talk we'll first study the level set $X^{-1}(u)$, $u \in \mathbb{R}^d$. In particular we'll give a weak condition for this level set to be rectifiable. Then, we will show how to establish a Kac-Rice formula to compute the $(D - d)$ Hausdorff measure. If time permits, we will conclude with some examples of application.

Joint work with José Rafael León (Universidad de la República, Uruguay) and Jean-Marc Azaïs (Université Paul Sabatier III, France).