## RANDOM PROJECTIONS AND GOODNESS-OF-FIT TESTS IN INFINITE-DIMENSIONAL SPACES

## JUAN ANTONIO CUESTA-ALBERTOS, RICARDO FRAIMAN, AND THOMAS RANSFORD

ABSTRACT. In this paper we provide conditions under which a distribution is determined by just one randomly chosen distribution. Then we apply our results to construct goodness-of-fit tests for the one- and two-sample problems. We include some simulations as well as the application of our results to a real data set.

Our results are valid for every separable Hilbert space.

DEPARTAMENTO DE MATEMÁTICAS, ESTADÍSTICA Y COMPUTACIÓN, UNIVERSIDAD DE CANTABRIA, SPAIN *E-mail address*: cuestaj@unican.es

Departamento de Matemática y Ciencias, Universidad de San Andrés, Argentina E-mail address: rfraiman@udesa.edu.ar

Département de mathématiques et de statistique, Université Laval, Québec (QC), Canada G1K 7P4 E-mail address: ransford@mat.ulaval.ca

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