

Comparing the marginal densities of two strictly stationary linear processes

 $Paul \ Doukhan^1 \cdot Ieva \ Grublyte^2 \cdot Denys \ Pommeret^3 \cdot Laurence \ Reboul^4$

Received: 3 July 2018 / Revised: 5 July 2019 / Published online: 22 August 2019 © The Institute of Statistical Mathematics, Tokyo 2019

Abstract

In this paper, we adapt a data-driven smooth test to the comparison of the marginal distributions of two independent, short or long memory, strictly stationary linear sequences. Some illustrations are shown to evaluate the performances of our test.

Keywords Linear processes \cdot Local Whittle estimator \cdot Long memory \cdot Schwarz's rule \cdot Smooth test \cdot Strictly stationary process

Denys Pommeret denys.pommeret@univ-amu.fr

- ² Institute of Mathematics and Informatics of Vilnius University, 4 Akademijos, 08663 Vilnius, Lithuania
- ³ ISFA, LSAF, and Aix Marseille Univ, CNRS, Centrale Marseille, I2M, Univ. Lyon 1, 163 Avenue de Luminy, 13009 Marseille, France
- ⁴ CNRS, Centrale Marseille, I2M, Aix Marseille Univ, 163 Avenue de Luminy, 13009 Marseille, France

Electronic supplementary material The online version of this article (https://doi.org/10.1007/s10463-019-00730-6) contains supplementary material, which is available to authorized users.

¹ Department of Mathematics, University Cergy-Pontoise, AGM-UMR 8080, 2 Bd. Adolphe Chauvin, 95000 Cergy-Pontoise, France