Change in variance detection for stationary Gaussian processes

Dr. Farida Enikeeva
(Université de Poitiers)

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We consider the problem of estimation of a change in variance in a stationary Gaussian sequence. A class of contrast functions based on p-variations of the underlying process is considered. We establish a functional limit theorem for p-variations and then study the properties of an estimator of the change-point based on p-variations. We then show how to apply these results to the case of a change in the Hurst parameter of a fractional Brownian motion.
Joint work with Hermine Biermé and Clement Chesseboeuf.