ALMOST SURE CENTRAL LIMIT THEOREMS FOR RANDOM RATIOS AND APPLICATIONS TO LSE FOR FRACTIONAL ORNSTEIN–UHLENBECK PROCESSES

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Abstract: We will investigate an almost sure central limit theorem (ASCLT) for sequences of random variables having the form of a ratio of two terms such that the numerator satisfies the ASCLT and the denominator is a positive term which converges almost surely to one. This result leads to the ASCLT for least squares estimators for Ornstein–Uhlenbeck process driven by fractional Brownian motion.

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