Translation Invariant Experiments with Independent Increments

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Abstract

There are numerous examples of statistical models where limiting models are translation invariant and have independent increments. For instance, one can mention i.i.d. observations with densities having jumps along some smooth lines and smooth elsewhere, different change-point type models, threshold autoregressive processes. In this talk we provide a full description of translation invariant models with independent increments and a large deviation result for the posterior distribution (and, as a consequence, for Pitman estimators) in these models. A special attention is paid to weak convergence inside this class of models. In particular, we extend recent results by Dachian and Negri (2011) to a larger class of models.