Hurst parameter estimation in the mixed model

Georgiy Shevchenko
(joint work with Yuliya Mishura and Marco Dozzi)

In my talk I will discuss so-called "mixed" models involving fractional Brownian motion and Wiener process. Main focus will be on the statistical estimation of the Hurst parameter of fractional Brownian motion. I will show how it can be made using asymptotic behavior of mixed power variations involving increments of fractional Brownian motion and Wiener process. I will discuss the estimators quality and illustrate it by simulation results.

References

[1] Marco Dozzi, Yuliya Mishura, Georgiy Shevchenko. Statistical estimation by power variations in mixed models. arXiv:1301.0993 [math.PR]

Mechanics and Mathematics Faculty, Taras Shevchenko National University of Kyiv
E-mail: `zhora@univ.kiev.ua`