Institut für Mathematik

Seminar zur Stochastik

Donnerstag, 27. April 2023
15 Uhr s.t.
SR 025 August-Bebel-Str. 4

Herr Prof. Dr. Pavel Chigansky
(Universität Jerusalem)

"Asymptotic analysis of integral equations with fractional covariance operators"

Abstract: Some problems in the theory and applications of stochastic processes reduce to solving integral equations with their covariance operators. Usually such equations do not have explicit solutions but still useful information can be extracted through asymptotic analysis with respect to relevant parameters. In this talk I will survey some recent results on such equations for processes related to the fractional Brownian motion. Applications include the problem of small deviations, linear filtering and statistical inference.

[1] P. Chigansky, M. Kleptsyna, Exact asymptotics in eigenproblems for fractional Brownian covariance operators. Stochastic Process. Appl. 128 (2018), no. 6, 2007–2059
[2] D. Afterman, P. Chigansky, M.Kleptsyna, D.Marushkevych, Linear filtering with fractional noises: large time and small noise asymptotics. SIAM J. Control Optim. 60 (2022), no. 3, 1463–1487
[3] P. Chigansky, M. Kleptsyna, Estimation of the Hurst parameter from continuous noisy data, arXiv:2205.11092

Alle Interessierte sind herzlich eingeladen

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