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Title. Limit and Ergodic Theorems for Perturbed Semi-Markov-Type Processes

Abstract.

The lecture aims to present and comment on the results of the recent books on perturbed semi-Markov-type processes and their applications:

- [1]** Silvestrov, D. (2025). Coupling and Ergodic Theorems for Semi-Markov-Type Processes II: Semi-Markov Processes and Multi-Alternating Regenerative Processes with Semi-Markov Modulation. Springer, Cham, xiv+550 pp.
- [2]** Silvestrov, D. (2025). Coupling and Ergodic Theorems for Semi-Markov-Type Processes I: Markov Chains, Renewal and Regenerative Processes. Springer, Cham, xiv+590 pp.
- [3]** Silvestrov, D. (2022). Perturbed Semi-Markov Type Processes II: Ergodic Theorems for Multi-Alternating Regenerative Processes. Springer, Cham, xvii+413 pp.
- [4]** Silvestrov, D. (2022). Perturbed Semi-Markov Type Processes I: Limit Theorems for Rare-Event Times and Processes. Springer, Cham, xvii+401 pp.
- [5]** Silvestrov, D., Silvestrov, S. (2017). Nonlinearly Perturbed Semi-Markov Processes. Springer Briefs in Probability and Mathematical Statistics, Springer, Cham, xiv+143 pp.