Degenerate cocycle with index-1 and Lyapunov exponents

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Abstract: This paper deals with the solvability of initial-value problem and with Lyapunov exponents for linear implicit random difference equations, i.e. the difference equations where the leading term cannot be solved. An index-1 concept for linear implicit random difference equations is introduced and a formula of solutions is given. Paper is also concerned with a version of the multiplicative theorem of Oseledets type. ?? 2007 World Scientific Publishing Company.

Author Keywords: Index-1 tractable; Linear implicit equation Lyapunov exponent; Random dynamical systems

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