Closure property and tail probability asymptotics for randomly weighted sums of dependent random variables with heavy tails

Lina Dindienė, Remigijus Leipus and Jonas Šiaulys

Vilnius University, Lithuania, lina.dindiene@gmail.com

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We consider the closure property and probability tail asymptotics for randomly weighted sums $S_{\Theta}^n = \Theta_1 X_1 + \cdots + \Theta_n X_n$ for long-tailed primary random variables $X_1, \ldots, X_n$ and positive random weights $\Theta_1, \ldots, \Theta_n$ under similar dependence structure as in [1]. In particular, we study the case where the distribution of random vector $(X_1, \ldots, X_n)$ is generated by an absolutely continuous copula.

References