

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

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

References

- [1] Yang, Y., Leipus, R., Šiaulys, J. (2014). Closure property and maximum of randomly weighted sums with heavy tailed increments. *Statistics and Probability Letters* **91**, 162–170.