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Summary: This paper investigates a bidimensional risk model with interference, in which the vectors of claim process and premium process are both compound Poisson-Geometric processes. Through martingale method and stopping time technique, we get the upper bound of the ruin probability. When the marginal of claim vector and premium vector follow bivariate FGM (Farlie-Gumbel-Morgenstern) class, we have discussed some properties of the upper bound.

MSC:
62P05 Applications of statistics to actuarial sciences and financial mathematics
91B05 Risk models (general)
91G05 Actuarial mathematics

Keywords:
Poisson-geometric process; bidimensional risk model; upper bound of ruin probability; martingale and stopping time; dependence structure

Full Text: Link