

SÉMINAIRE DE MATHÉMATIQUES ACTUARIELLES ET FINANCIÈRES

organisé par Quantact, le Laboratoire de mathématiques actuarielles et financières du CRM

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2425, rue de l'Agriculture, Québec
Université Laval
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Improved Algorithms for Computing Worst Value-at-Risk: Numerical Challenges and the Adaptive Rearrangement Algorithm

Numerical challenges inherent in algorithms for computing worst Value-at-Risk in homogeneous portfolios are identified and solutions as well as words of warning concerning their implementation are provided. Furthermore, both conceptual and computational improvements to the Rearrangement Algorithm for approximating worst Value-at-Risk for portfolios with arbitrary marginal loss distributions are given. In particular, a novel Adaptive Rearrangement Algorithm is introduced and investigated. These algorithms are implemented using the R package *qrmttools*.

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Thinking of measuring risk: back to basics

“The dose makes the poison,” said Paracelsus, the father of toxicology. Thinking of risk, how much of it is good or bad? Despite all the illuminating results available in the literature on the topic, I will go back to the very basics: I will first briefly touch upon risk preferences, then look at some elusive behaviour of larger risks such as losses above deductibles, and finally venture into the tails. Those very few clarifications that will emerge from my talk will eventually be overshadowed by new questions and open problems, but I hope they will inspire some further work in the area.