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Optimal Reinsurance Design

Reinsurance can be an effective risk management technique for an insurer. An appropriate use of reinsurance reduces the adverse risk exposure of an insurer and improves the overall viability of the underlying business. The use of reinsurance, on the other hand, incurs additional cost to the insurer in the form of reinsurance premium. This implies that an insurer is faced with a classical tradeoff between risk spreading and risk retaining. An optimal reinsurance design aims at striking a balance between these two conflicting objectives. In this talk, I will introduce some of my recent works on this topic.