On Solving Stochastic Optimization Problems Using Integral Representations

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Riesz-type integral representations for excessive function of a Markov process are well-known in the potential-theoretic literature. This talk explains the use of these representations for solving stochastic optimization problems, particularly for optimal stopping- and impulse-control-problems. To illustrate this approach, we study the famous multidimensional optimal investment problem and obtain new results.

The talk is based on joint work with P. Salminen.