MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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(joint work with Udi Makov and Tomer Shushi)

A generalized risk measure for the problem of optimal portfolio selection and its explicit solution.

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Refreshments 10:00 am
C405 Wells Hall

Abstract

In this paper we present the explicit solution of a problem of maximization of a fractional of function of a linear functional and function of a quadratic functional subject to a system of the linear constraints. This model essentially generalizes the result of Landsman and Makov (2013), where the problem of minimizing the combination of linear functional and a function of quadratic functional was considered. This is of interest for solving important problems in financial economics related to optimal portfolio selection. The new results essentially generalize the classical results and the previous original results of the authors. In particularly, the results covers the mean-variance principle, the recently introduced tail mean-variance principle, the optimization with translation invariant and positive homogeneous risk measures as well as the optimization on the Sharpe ratio principle. The results are demonstrated with important examples.

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