Robust Decision Making using a General Utility Set

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Highlights

- Propose a robust optimization model under uncertainty in assessing a decision-makers utility function.
- Formulate its Lagrangian dual problem and show the duality properties.
- Develop the SAA based mixed-integer solution method of the Lagrangian dual.
- Prove the asymptotic convergence and exponential convergence rate of the solution approach.
- Test the performance of the model and solution method in a portfolio investment problem.