Call for papers for a special issue of Finance and Stochastics on "Vector- and set-valued methods in stochastic finance and related areas"

Markets involving transaction costs or illiquidity, multi-utility representations of incomplete preferences, or risk measures and quantiles for multivariate positions can be modelled by means of set-valued functions, and this leads to interesting and mathematically challenging problems. With the goal of fostering activity in these important current developments, *Finance and Stochastics* will devote a special issue to this area. This special issue welcomes (but is not restricted to) contributions to the following topics:

– multi-utility maximisation and its application to portfolio selection
– Knightian uncertainty optimisation and new approaches to stochastic dominance optimisation for the uni- and multivariate case
– quantiles, VaR and second order stochastic dominance for multivariate positions, corresponding AVaRs, Kusuoka-type representations for set-valued risk measures
– dynamic problems and time-consistency for risk measures and utility maximisation
– set-valued approaches to systemic risk measures and their optimisation
– asset–liability management and risk minimisation with set-valued risk measures
– appropriate concepts for stochastic integration of set-valued functions
– applications of the complete lattice concepts from set optimisation to finance, statistics, insurance
– multivariate Choquet integrals/theorems, random set approach to above problems
– computational methods for above problems based on new theoretical ideas

Papers of high quality and originality are called for. They could focus on new methods/algorithms or significant improvements in the above areas, or they could be authoritative and well-written survey papers, for example comparing competing approaches to multivariate financial models with incomplete preferences. Papers that have no relation to stochastics at all, or papers that only consider empirical investigations, are unlikely to meet the criteria for acceptance.

All papers will be reviewed in the usual way so that only papers which meet the high standards of *Finance and Stochastics* will be published. The target time for the special issue to appear is late 2020 or early 2021. Ideally, papers should be submitted by October 2019, but this is not a hard deadline. All accepted papers will be published in *Finance and Stochastics*; the final selection for the special issue will be made by the editors.

Submission of papers for the special issue should be done in the usual way by e-mail to finasto@math.ethz.ch, with the phrase "special issue" in the subject to clarify that the paper is to be considered for the special issue. If you are in doubt about the suitability of a specific subject or paper, please contact the Guest Editor of the special issue, Andreas Hamel, at Andreas.Hamel@unibz.it.