Lin, Gui-Hua; **Fukushima, Masao**

Stochastic equilibrium problems and stochastic mathematical programs with equilibrium constraints: a survey. (English) Zbl 1200.65052

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Summary: Recently, various equilibrium problems under uncertainty and related problems have drawn increasing attention from the optimization research community. Novel formulations and numerical methods have been proposed to deal with those problems. This paper provides a brief review of the recent developments in the topics including stochastic variational inequality problems, stochastic complementarity problems and stochastic mathematical programs with equilibrium constraints.

MSC:

65K15	Numerical methods for variational inequalities and related problems
65K05	Numerical mathematical programming methods
49J40	Variational inequalities
49J55	Existence of optimal solutions to problems involving randomness
90C15	Stochastic programming
90C33	Complementarity and equilibrium problems and variational inequalities (finite dimensions) (aspects of mathematical programming)
65-02	Research exposition (monographs, survey articles) pertaining to numerical analysis

Keywords:

stochastic variational inequality problem; stochastic complementarity problem; stochastic mathematical program with equilibrium constraints; survey paper

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