
Preface

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In *IJRAM* issues Vol. 17, No. 3, 2014, and Vol. 18, No. 1, 2015, we have published two papers describing the logical and probabilistic (LP) approach for estimation and analysis of the risk in various practical problems. This special issue continues to explain this theme. The issue is devoted to risk management technologies in structurally complex systems and contains papers about the developing scientific trend of analysis and management of risks based on LP models. The authors are well-known specialists in LP modelling of systems and processes. This issue will be interesting for specialists who are engaged in estimation, analysis and management of risk in structurally complex systems, and who are teaching in technical and economic faculties in universities.

In the presented papers, systems and processes are considered as structurally complex with logical connections and random events. Components of risk management technologies are the following: LP calculus, LP risk model classes, procedures of technologies, special software, application examples and training courses. The presented works consider the following classes of LP risk models: LP modelling, LP classification, LP efficiency, LP forecasting, and hybrid LP models. The procedures are used: LP risk models construction, LP model identification by statistical data, LP risk analysis, LP risk management. LP forecasting of risk is performed in the space of states and estimated probabilities of events in LP models. System dynamics is provided by the change of probabilities of initiating events in LP models by statistical data, non-numeric, inaccurate and incomplete expert information, and as a result of appearance of new events in economics, politics and laws. Some papers describe the history of the development of LP calculus and its application for risk analysis. The majority of papers are devoted to the application of LP modelling in social and economic systems and processes. Several papers describe complex LP risk models with cycles and repeated events.