

# **RISK MODELING, ASSESSMENT, AND MANAGEMENT**

**Third Edition**

**Supplementary Problems and Exercises**

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# About the Supplementary Problems and Exercises

For the first time, the 3<sup>rd</sup> edition of the book *Risk Modeling, Assessment, and Management* comes with a set of supplementary problems and exercises resulting from a longstanding collaboration with my colleague and former student, Joost Santos. This set contains a compilation of 150 exercises and problems featuring risk analysis theories, methodologies, and applications. Its objective is to provide reinforced learning experiences for risk analysis scholars and practitioners through a diverse set of problems and hands-on exercises. The problems and exercises encompass a broad spectrum of applications including disaster analysis, industrial safety, transportation security, production efficiency, and portfolio selection, among others.

Ideas and raw materials for the supplementary problems and exercises are attributable to numerous students who participated in the Risk Analysis course offering for the last 20 years. The production of this supplement would have not been possible without the help of the following student encoders: Dexter Galozo, Jonathan Goodnight, Miguel Guerra, Sung Nam Hwang, Jeesang Jung, Mark Orsi, Oliver Platt-Mills, Chris Story, Scott Tucker, and Gen Ye. We would like to acknowledge, in particular, Chris Story for his tireless efforts and attention to quality. He has devoted more than a year of his time to provide valuable assistance in terms of computer encoding as well as checking for the accuracy of each problem or exercise. Last but not the least, I would like to once again acknowledge Grace Zisk for her meticulous editing and suggestions to standardize the structure of each solved problem.

For better tractability, the problems and exercises are organized in a similar manner as the chapters of the book and progress from foundation topics (e.g., building blocks of modeling and structuring of risk scenarios) to relatively more complex concepts (e.g., multiobjective trade-off analysis and statistics of extremes). The table of contents provides an itemized list of the 150 problems and exercises. Of the 150 problems and exercises, 80 of these are solved. The remaining 70 are unsolved exercises, which are labeled with asterisks (\*).

Yacov Y. Haimes  
Joost R. Santos

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