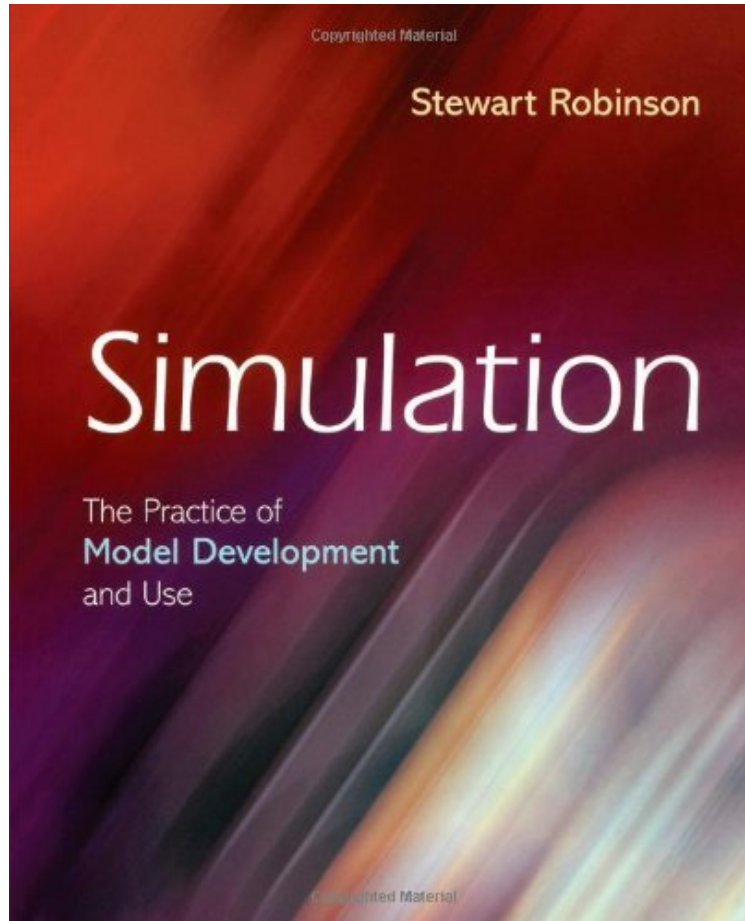


Simulation: The Practice of Model Development and Use

Stewart Robinson

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Stewart Robinson : Simulation: The Practice of Model Development and Use before purchasing it in order to gauge whether or not it would be worth my time, and all praised Simulation: The Practice of Model Development and Use:

Simulation modelling involves the development of models that imitate real-world operations, and statistical analysis of their performance with a view to improving efficiency and effectiveness. This non-technical textbook is focused towards the needs of business, engineering and computer science students, and concentrates on discrete event simulations as it is used in operations management. Stewart Robinson of Warwick Business School offers guidance through the key stages in a simulation project in terms of both the technical requirements and the project management issues surrounding it. Readers will emerge able to develop appropriate valid conceptual models, perform simulation experiments, analyse the results and draw insightful conclusions.

From the Back Cover Simulation models enable the user to better understand and explore improvements to an operations system such as a manufacturing, service, transport or supply system. It is a powerful management tool, providing a means for improving an organization's efficiency and effectiveness. Advances in modern software mean that simulation is accessible to many organizations. However, there is much more to simulation than simply using a software package. Issues have to be addressed such as what to include in the model, how to deal with uncertainties in the data and what experiments to perform. It is also important to consider the accuracy of the model and the results that are obtained. *Simulation: The Practice of Model Development and Use* describes the steps involved in a simulation study, drawing together both the theoretical and the practical perspectives. Having introduced the concept of simulation, specific topics covered include: How a simulation works Selecting simulation software Designing an appropriate conceptual model Developing the computer based model Experimenting with the simulation Implementation Verifying and validating the simulation Simulation in practice Two case study examples illustrate the principles that are described. Simulation modellers need to apply these principles whatever the software they are using for developing models. This book is ideal for students studying simulation modelling as well as being an essential guide for practitioners using simulation modelling in practice. A website to accompany the book can be found at www.wileyurope.com/go/robinson "This book is a comprehensive guide to getting the best out of simulation; it will be invaluable as both a student text and as support for users in business. It combines pragmatic guidance with the necessary theoretical basis to underpin a successful approach to simulation projects. A good foundation book for newcomers to the technique and also as a reference for the more experience practitioner. The book includes examples to better explain the technical issues and is written in an easy and accessible style." Geoff Hook, Consulting Projects Director, Lanner Group. Lanner Group are the developers of the WITNESS range of simulation products. "The success of a simulation study depends on the adopted simulation tools, use and understanding of statistical methods and adequate management skills. The latter skills refer to the integrative use of tools and statistics within a project frame. This book addresses just these skills, building on the latest scientific insights and as such is a significant help for practitioners and students in mastering their simulation studies and providing adequate answers to the questions posed." Durk-Jouke van der Zee, Assistant Professor, Production Systems Design Group, Faculty of Management and Organization, University of Groningen About the Author Stewart Robinson is a Senior Lecturer in Operational Research at Warwick Business School. With more than 15 years experience of simulation and its practice, he has consulted for many national and international organizations. His teaching and research focus on simulation and the practical application of operational research. These are subjects on which he has published three books and more than 40 articles.