



كلية الحاسبات والذكاء الاصطناعي

SC311

Modeling and Simulation

Description

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Benha University

Spring 2023



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Basic Course Information

- Course code: **SC311**
- Course name: **Modeling and Simulation**
- Level: **3rd Year / B.Sc.**
- Instructor: **Dr. Ahmed Hagag**



Assessment

Final Exam

50

الامتحان النهائي

Attendance

5

الحضور

Assignments

10

الواجبات

Midterm

15

منتصف الفصل

Oral & Project

10

الشفوي مع المشروع

Lab Exam

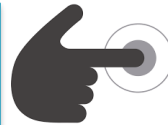
10

اختبار العملي

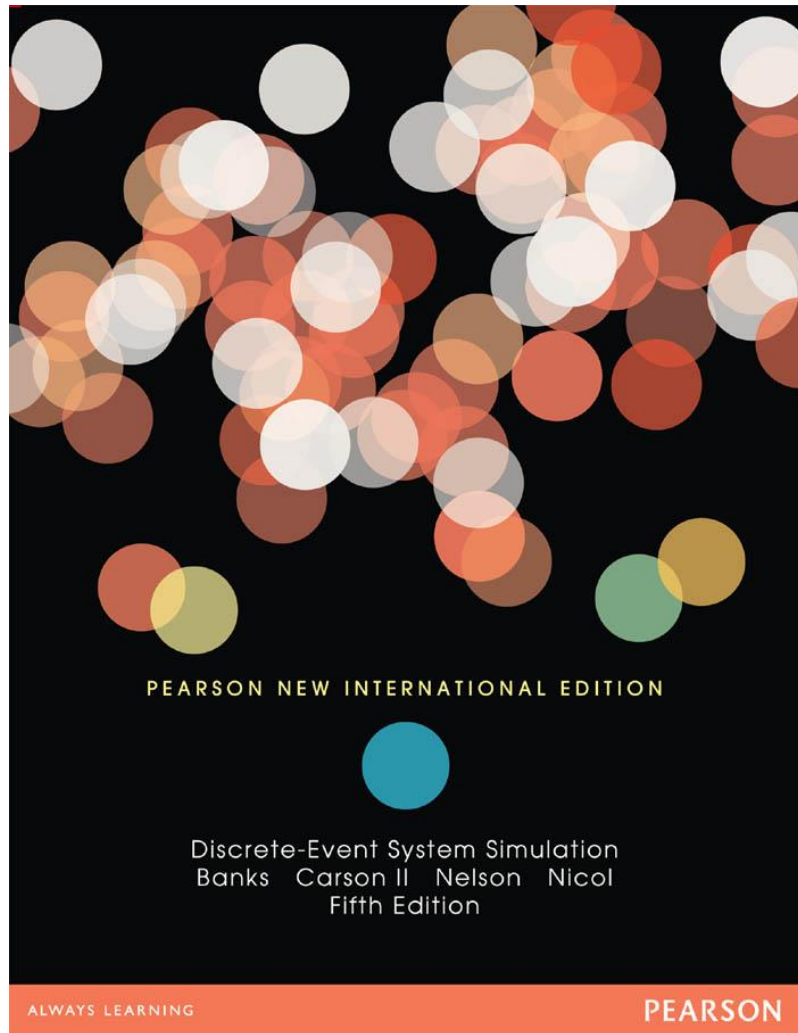
Simulation Software



You can find documents and tutorials at this website

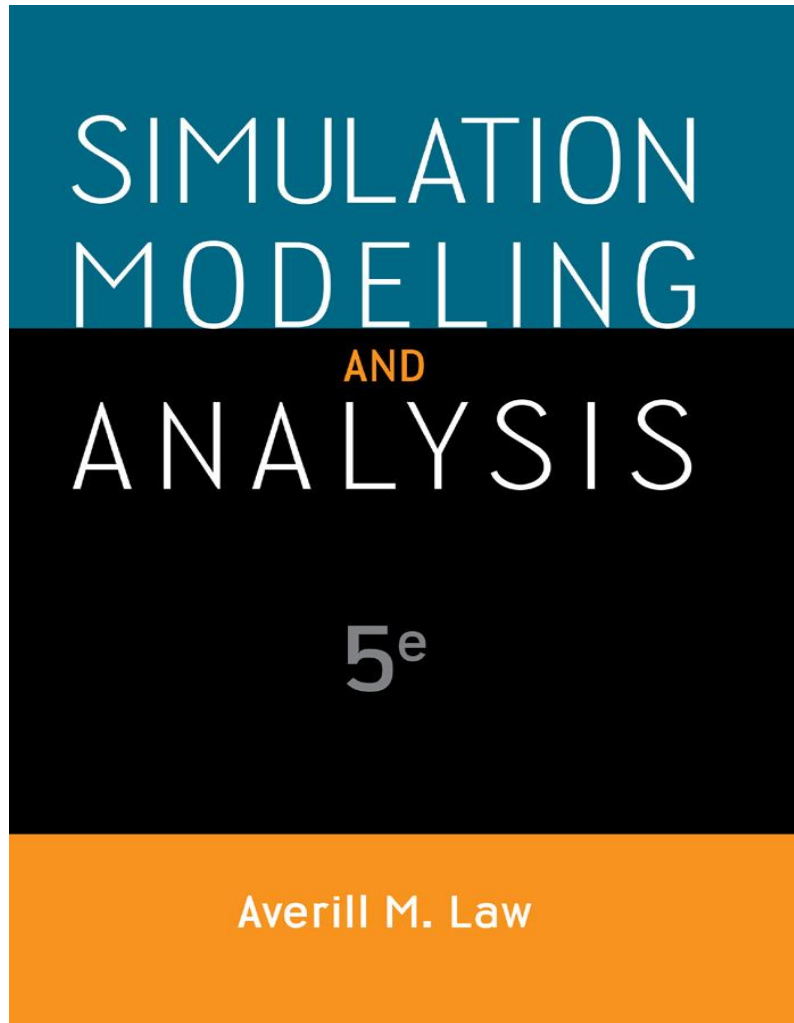


<https://www.anylogic.com/>



Discrete-Event System Simulation

Banks Carson II Nelson Nicol
Fifth Edition

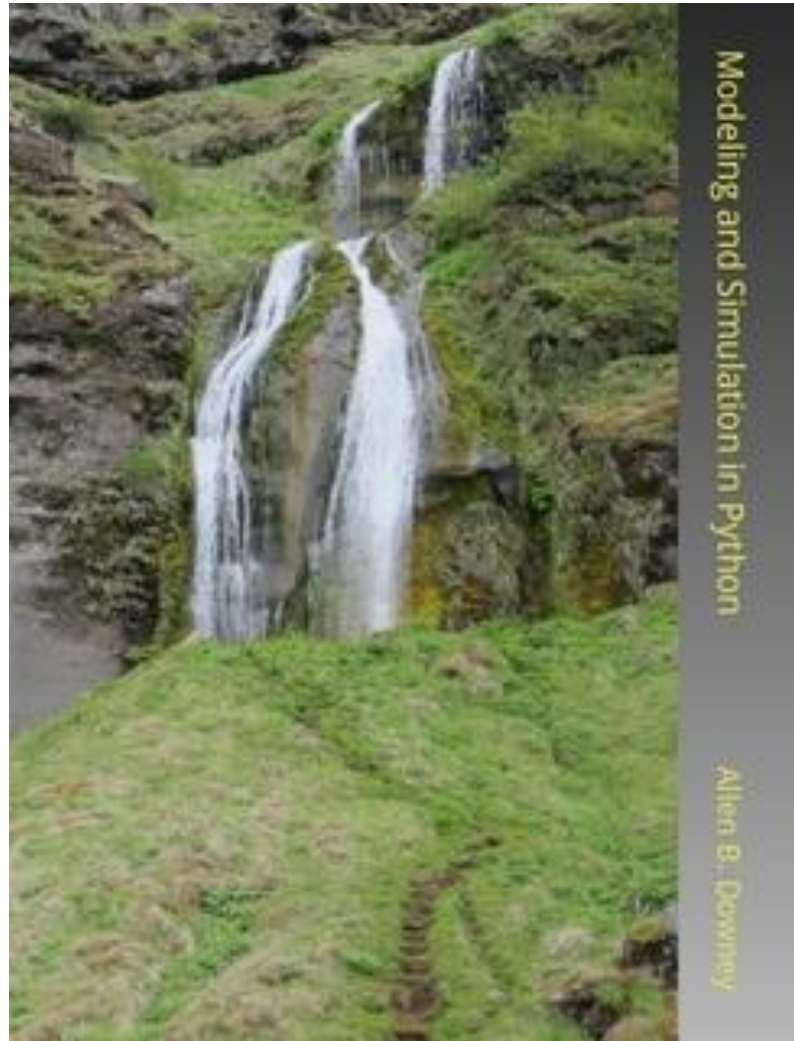


Simulation Modeling and Analysis

Averill M. Law

Fifth Edition

Lectures References (3/4)



Modeling and Simulation in Python

Allen B. Downey

Version 1.0.2



Lectures References (4/4)

Devendra K. Chaturvedi

Modeling and Simulation of Systems Using MATLAB[®] and Simulink[®]

 CRC Press
Taylor & Francis Group

**Modeling and Simulation of Systems
Using MATLAB and Simulink**
Devendra K. Chaturvedi



Course Objectives

This subject provides students with:

- The basic system concept and definitions of system.
- Techniques to model and to simulate various systems.
- The ability to analyze a system and to make use of the information to improve the performance.
- Some basics of Programming.



Course Syllabus

- Chapter 1: Introduction.
- Chapter 2: Probability as Using in Simulation.
- Chapter 3: Queueing Simulation.
- Chapter 4: Inventory Simulation.
- Chapter 5: Random-Number Generation.
- Chapter 6: Statistical Models in Simulation.
- Chapter 7: Input Modeling.

Thank You

Dr. Ahmed Hagag

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