《仿真建模与分析》

图书基本信息

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前言

仿真建模与分析（Simulation Modeling&Analysis）的第四版问世了。正如作者在序言中所言，与第三版一样，第四版对离散事件系统仿真研究的所有重要方面给出了综合性的最新论述，包括建模、仿真软件、模型校验和确认、输入建模、随机数发生器、随机变量与随机过程的产生、统计设计与仿真实验分析，以及像制造这一类主要工业领域的应用等。　　那么，第四版的内容有何新变化和新特点呢？较之第三版，第四版基本保持了第三版的体系结构，因而仍具有第三版的许多特点，但在内容上做了许多调整。所有章节的相关内容的最新进展均得到补充，给出了最新论述和结果，各章的习题也做了相应的调整和补充，其中主要包括：　　（1）将第三版中所有FORTRAN程序删除了，以反映当前主流编程语言是c语言这样一种情况，使相关章节变得更为简练。对FORTRAN仍感兴趣的读者，可以从www.mhhe.com／Law网址下载相关代码。　　（2）对仿真软件的介绍进行了重新改写，以反映第三版以来，国际上流行的几种仿真软件如Arena、Extend等的最新进展。　　（31近些年来，模型的校验、验证及确认技术（VV&A）得到广泛的注意并取得了许多进展，因此作者对该部分进行了重新编写，例如，第四版大大扩充了关于如何由仿真模型的输出数据来确定仿真模型的有效性，包括与已有系统的输出进行比较、与专家的意见比较，以及与其它模型进行比较等技术。　　（41关于随机数发生器，第四版详细讨论了反馈移位寄存器发生器（第三版称为Tausworthe发生器）的实现，包括LFSR.、GFSR以及TGFSR等。　　（5）关于随机变量的产生，第四版增加了一种新舍选法一一均匀比法（ratio-of－uniforms method）。　　（61在多系统比较方面，第四版修订了排序及选择程序（ranking and selection procedure），以允许公共随机数（CRN）用于跨系统配置等，对基于公共随机数的方差减少技术的实现给出了更为详细且实用的讨论。

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内容概要

《仿真建模与分析(第4版)(清华版双语教学用书)》自1982年首次出版以来，在世界范围内得到广泛采用，被誉为仿真领域的“ 圣经 ”。最新版（第4版）对离散事件系统仿真研究的所有重要方面给出了综合性的最新论述，包括建模。仿真软件、模型校验和确认。输入建模，随机数发生器。随机变量与随机过程的产生。统计设计与仿真实验分析，以及像制造这一类主要工业领域的应用等。

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Figure 2.8 shows init_model, which begins by setting the num_custs_delayed counter to 0 for the number of delays observed. The first arrival event is then sched-uled by invoking event_schedule with the desired event time （a float） as the first ar-gument and the event type （an int） as the second argument; note that adding sire_time to the generated exponential interarrival time in the first argument is not strictly necessary here since sim_time is now zero, but we write it this way to show the general form and to emphasize that the first argument of event_schedule is the （absolute） time in the simulated future when the event is to occur, not the interval of time from now until then. In Chap. 1 wehad to set the time of impossible events to（actually, 1030）, but now we simply leave them out of the event list, ensuring that they cannot be chosen to happen next. Thus, we just do not schedule a departure event at all here. In Fig. 2.9 is the code for event function arrive, which begins by using event_schedule to schedule the next arrival event, in a manner similar to that in init_model （here, adding sim_time to the generated exponential interarrival time is necessary since sim_time will be positive）. We then check to see whether the server is busy, by asking whether the server list contains a （dummy） record; this is done by checking whether list_size[LIST_SERVER] is equal to 1. If so, the arriving cus- tomer must join the end of the queue, which is done by placing the time of arrival （the current clock value, sim time） into the first location of the transfer array, and by filing this record at the end （option = LAST = 2） of the queue list （list = LIST_QUEUE = 1）. Note that we do not have to check for overflow of the queue here since simlib is automaticallyallocating storage dynamically for the lists as it is needed. On the other hand, if the server is idle, the customer experiences a delay of 0, which is noted by invoking sampst; this is necessary even though the delay is 0, since sampst will also increment the number of observations by 1. We increment num_custs_delayed since a delay is being observed, and a departure event is sched-uled into the event list; note that we are dedicating stream EVENT_DEPARTURE （=2） to generating service times.

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精彩短评

1、这本书内容很丰富、详实
2、和第三版差不多，对个别地方作了更新，顶级专家能感到区别
3、书里面内容丰富，可以拿来认真专研专研~~只是干净整洁度有些差~
4、虽然英文，但原汁原味，仔细研读，受益匪浅
5、外文的，内容不错
6、学这门课 这本教材几乎是不二选择 虽说是全英文 但是不是很古板难懂
7、专业性强，要有很好的数学基础
8、书中PREFACE中说可以从***.mhhe****/law上下载教学课件，但需要联系代理方，要账号和密码，老板应该有吧？
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12、不是双语，这是全英文的，大家注意
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14、这次物流也快，很好，就是还有一本书缺货，有点遗撼。

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