计算物理学

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《计算物理学(英文版)(第2版)》是一部理论物理研究的计算方法的教程。这是第二版，在第一版的基础上做了大量的更新，内容更加全面。新增加的部分包括，有限元方法，格点boltzmann模拟，密度函数理论，量子分子动力学，monte carlo模拟和一维量子系统的对角化。书中囊括了了物理研究的很多不同方面和不同计算方法论。如monte carlo方法和分子模拟动力学以及各种电子结构方法论，偏微分方程解方法，格点规范理论。全书都在强调不同物理场中的方法之间的关系，内容较为简洁明快，具有基本编程，数值分析，场论以及凝聚态理论和统计物理的本科知识背景就可以完全读懂《计算物理学(第2版)》。不管是理论物理，计算物理还是实验物理专业的研究生还是科研人员，《计算物理学(第2版)》都相当有参考价值。目次：导论；具有球对称势的量子散射；schrdinger方程的变分大法；hartree-fock方法；密度函数理论；周期性固态schr.dinger方程解法；经典平衡态统计力学；分子动力学模拟；量子分子动力学；monte carlo方法；变换矩阵和自旋链的对角化；量子monte carlo方法，偏微分方程的有限元方法，流体力学的lattice boltzmann方法，格点场论的计算方法；高效能计算和并行法；附：数值法；随机数发生器。

读者对象：物理专业，包括理论物理，计算物理，实验物理的高年级本科生，研究生和

相关的科研人员。

作者介绍:

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评论

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12年12月28日，开会的时候看陈老师手上拿着一本书，还以为是电子结构。人家刚从伯克利回来，所以俺就凑过去套了下近乎，结果发现不是电子结构~而是这本书。我当时在想这初学者的书还要看吗？陈老师和魏苏怀都发了N篇的PRB了~~~计算物理初级和中级过渡读物。推荐！

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