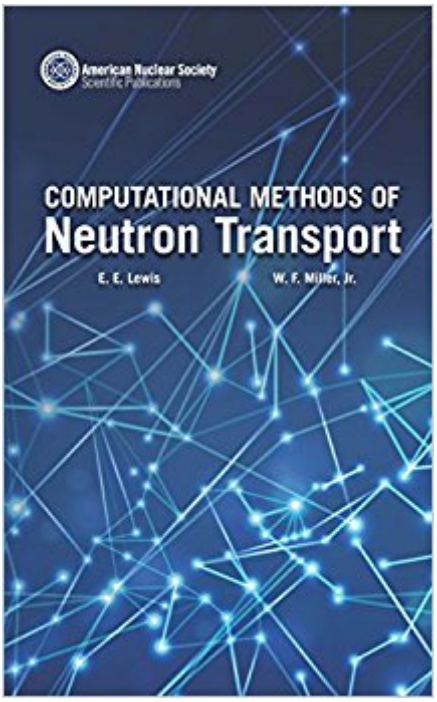
Computational Methods Of Neutron Transport



Synopsis

Book by Elmer E. Lewis, Warren F. Miller Jr.

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Customer Reviews

Book by Elmer E. Lewis, Warren F. Miller Jr.

I teach computational methods for neutral-particle (neutrons and gammas) radiation transport. This textbook appeared just after I did my Ph.D. dissertation in this area. I have taught from it since 1987. The "second edition" is not really a new revision; it does correct some typos in the original book. This art has advanced in many ways since then. However, this book explains the various approaches that are used, and is a must-read before trying to read the journal literature. It is also an indispensible reference. Each chapter has an extensive list of literature upon which it is based, including some of the earliest publications. A suggestion for those studying the material on angular discretizations for the discrete ordinates method: get a Lenart Sphere. This is a transparent hard plastic sphere with transparent hemispherical overlays. It comes with a compass for small-circle arcs, a protractor, and a tool for drawing great circle arcs, measuring arc lengths, and drawing great-circle ars at right angles to each other. Visualization in 3d is really valuable.

Nuclear Fuel Cycle: Analysis and Management by Robert G. Cochran, Nicholas Tsoulfanidis. This book is an overview treatment which does not treat engineering details. It covers the important

materials at an undergraduate level. For graduate work it is inadequate, but it is a good complement to Benedict, Pigford and Levi, where the engineering detail can be found. (BP&L, unfortunately, is out of print.) This book gives the current context of the nuclear fuel cycle, which is out of date in BP&L.

The overview of the book is for Computation Mthods of Neutron Transport. written by E.E. Lewis and W.F. Miller, Jr. An excellent book on neutron transport and the Boltzamann equation. I don't know anythin about nuclear fuels - and was looking for a book on Neutron transport and Amamzon.com's web-site seems to have mixed the two books up.