

BOOKSHELF

Chaos in the Kitchen = Symmetry at the Table edited by Beate Block and Maggie DeWolf, Mountainair press, ISBN 092952618X, \$25 (€29).

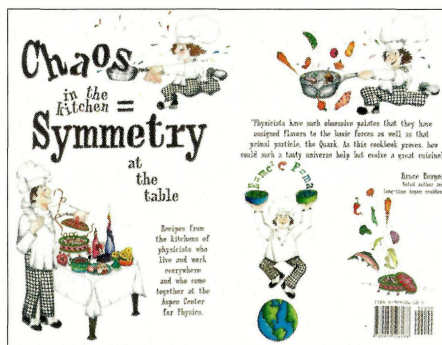
It is somewhat unusual to review a cookbook in *CERN Courier*, but then this is a somewhat unusual cookbook. A collection of recipes assembled by the wife of a physicist at the Aspen Center for Physics, the book is as much a glimpse into the mindset of physics as it is a book about cooking.

The introductory pages deal with Aspen, but you'd have had to have been there to get the most out of it. The recipes begin with sections devoted to extraordinary chefs. There you'll learn how to make risk-free mayonnaise, and why it's best to whip egg whites in copper bowls. You'll also learn some of the culinary secrets of Fermilab's famed Chez Leon. One of the extraordinary chefs is Tita Alvarez Johnson, who founded the restaurant and gives it a memorable atmosphere to this day.

The rest of the book is divided into chapters sorted by region. Contributors are often mentioned by name, occasionally along with tasters. This makes for interesting, if slightly voyeuristic, reading. Here physicists will find the recipes of colleagues, their wives and even mothers-in-law. The presence of fondue Chinois betrays a CERN influence, and at least one Aspen visitor must have been to a La Thuille meeting, since the Aosta valley speciality "la Grolla" makes an appearance. In these chapters, you can even learn that at least one delegate to CERN Council has a soft spot for chocolate (a Belgian, of course).

The final section, "Drinks and amusements", is definitely by physicists for physicists. There you'll find a learned treatise on "Interparticle forces in multiphase colloid systems" – or how to resurrect coagulated sauce béarnaise. The thermodynamics of the perfect Martini are also covered here.

A chef once told me that to review a cookbook properly, you have to make all of the recipes. After spotting mysterious ingredients, such as powder steam and others still more exotic, this reviewer shied away from that approach and chose instead to dip into the book simply for the pleasure of it. Making the recipes will follow, starting with those from Chez Leon. Although the book may tell you how to make Tita's recipes, unfortunately it doesn't give her recipe for creating a memorable atmosphere – that you will have to discover for yourself.



All proceeds from *Chaos in the Kitchen = Symmetry at the Table* go to the Aspen Center for Physics. Ordering information is available from The Aspen Center for Physics, 700 West Gillespie St, Aspen, Colorado 81611, USA, or email jane@aspenphys.org. James Gillies, CERN.

Electron Scattering for Nuclear and Nucleon Structure by John Dirk Walecka, *Cambridge Monographs on Particle Physics, Nuclear Physics and Cosmology*, Cambridge University Press, ISBN 0521780438, £60 (€98).

The author is well placed to write a monograph on this classic subject which, like no other, bridges the gap between nuclear and particle physics through common concepts and techniques. He can look back on a long and distinguished career in this field as professor of physics at Stanford University, as scientific director of CEBAF (now Jefferson Lab), and now as professor of physics at the College of William and Mary.

The book is based largely on a series of lectures on the subject given at CEBAF. Given the author's track record, it is only natural that the book should focus on electron scattering in the few-gigaelectronvolts energy domain. At the same time, it exploits the power of the theoretical concepts developed originally for low-energy scattering, to address an audience much wider than students and researchers at laboratories such as MIT Bates, JLab and the Mainz microtron. This is achieved through a clear structure and pedagogical distinction between the theoretical framework and practical applications.

The book is organized into five parts, two of which contain the core material. Part 2 – "General analysis" – is one of the most comprehensive reviews of the theory and phenomenology of electron-nucleus and electron-nucleon scattering that can be found

in the literature today. This chapter is recommended reading not only for nuclear physicists, but also for every graduate student working on electron, muon and neutrino scattering, to acquire a detailed understanding of the roots and the development of the formalism applied to present-day high-energy experiments. It includes discussions of polarized deep inelastic scattering and of parity violation in electron scattering.

Part 4 – "Selected examples" – is targeted specifically at nuclear physicists. The applications of scattering theory focus on detailed discussions of classic nuclear-structure problems and experiments; three sections on the quark model, QCD, and the Standard Model embed the subject in the wider theoretical context. Recent deep inelastic electron and muon scattering experiments are not covered in a systematic way (however, they have been discussed in many other excellent reviews).

The three remaining parts of the book are more succinct. Part 1 is an easy-to-read introduction, and part 3 discusses quantum electrodynamics and provides an introduction to radiative corrections, which unfortunately is too concise to be of much practical use. Finally, part 5 gives an overview of future directions, which again focuses on the CEBAF/JLab experimental programme. A useful feature is an extensive set of appendices, providing handy reference material.

The author has accomplished a successful blend of textbook and monograph. Written by a nuclear physicist for nuclear physicists, it is a must for students and seasoned researchers alike engaged in electron-nucleus scattering. This book will also be eminently useful and rewarding for the deep-inelastic-scattering community to read, to learn about the origin of their field and its intimate relationship with one of the most important subject matters in nuclear physics. Rüdiger Voss, CERN.

Books received

Antimatter – the Ultimate Mirror by Gordon Fraser, Cambridge University Press, ISBN 0521893097, £12.95 (\$18).

Former *CERN Courier* editor Gordon Fraser has added brand-new material for the paperback edition of his fast-paced account of the story of antimatter.