

## Book Review

**Fusion Neutronics.** By Yican Wu. Springer Nature (2018). ISBN 978-981-10-5469-3. 393 pages. Price \$109.00 (ebook).

Reviewer: Zhibin Chen, FDS Team at the Institute of Nuclear Energy Safety Technology, Chinese Academy of Sciences

The recently published book *Fusion Neutronics*, by Prof. Yican Wu, director general, Institute of Nuclear Safety and Technology, Chinese Academy of Sciences, contains 13 chapters organized into three parts covering key fusion neutronics topics from fundamental theories and methodologies to fusion system designs and experiments. In the first part, neutronics theories and methodologies for fusion are introduced, including unique decomposition-based modeling methods filling the gap from complex engineering

models to neutronics models, high-performance comprehensive calculation methods with features of recognition and acceleration, and widely applied typical integrated neutronics simulation systems such as MCNP and SuperMC. In the second part, fusion neutronics design principles are illustrated with representative examples including experimental reactors, DEMO reactors, fusion power reactors, and fusion-fission hybrid reactors. In the third part, typical fusion neutronics experimental technologies and facilities (e.g., HINEG) are presented. The current status and development trend of fusion neutronics experiments are also illustrated.

This is the first-ever book focusing on the subject of fusion neutronics research and appears well suited for undergraduate and graduate students and also as a useful reference book for those working in the area of fusion research.