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Nota di contenuto	Frontmatter -- Preface -- Main contributors -- List of abbreviations -- Foreword -- Contents -- Chapter 1 Introduction -- Part 1 General overview of research reactors at international level -- Chapter 2 The different types of research reactors, overall global situation, uses and associated risks -- Chapter 3 Aspects of the design and safety demonstration of research reactors at international level -- Chapter 4 International experience feedback for research reactors -- Part 2 Research reactors in France -- Chapter 5 Evolution of the French research reactor "fleet" -- Chapter 6 Stakeholders and organization of research reactor safety in France -- Chapter 7 Safety principles for French research reactors -- Chapter 8 The reference accidents selected for French research reactors -- Chapter 9 Maintaining compliance with the applicable requirements - Safety Reviews -- Chapter 10 Operating experience feedback from French research reactors -- Chapter 11 Overview of simulation software used in design studies and safety analyses for French research reactors
Sommario/riassunto	This publication gives a global overview of the diversity and complementarity of research reactors, some of which have been or are still being used to conduct experiments that are essential for the development and operation of nuclear power reactors, including in relation to safety issues. This work highlights the many uses of these reactors, which have very different designs, use highly varied quantities of radioactive substances with varying levels of risk for safety and

radiation protection, and which - in many cases because they are old or have been shut down - require appropriate measures to control the ageing or obsolescence of some of their equipment, as well as, on an organisational and human level, to ensure that they continue to be operated safely. For some research reactors, safety and radiation protection aspects must be considered, taking into account that two types of operators are present at the same time within these reactors: reactor operating personnel and operators in charge of experimental devices using neutrons from the reactor for fundamental or applied research purposes. There are two specific chapters on the safety standards established under the aegis of the IAEA for research reactors and on serious accidents, notably those involving criticality and reactivity, in research reactors. The second part of the work focuses on French research reactors, including the regulations and official documents applicable to these reactors, on lessons learned in France from significant events and accidents - as well as abroad, such as the Fukushima Daiichi nuclear power plant accident in 2011 - on the consideration of reactivity accidents in the design of French research reactors, and on the ten-yearly safety reviews carried out in France.