In nuclear fusion technology, thermal-hydraulics is a key discipline employed in the design phase of the systems and components to demonstrate performance, and to ensure the reliability and their efficient and economical operation. ITER is in charge of investigating the transients of the engineering systems; this included safety analysis. The thermal-hydraulics is required for the design and analysis of the cooling and ancillary systems such as the blanket, the divertor, the cryogenic, and the balance of plant systems, as well as the tritium carrier, extraction and recovery systems.

This Special Issue collects and documents the recent scientific advancements which include, but are not limited to: thermal-hydraulic analyses of systems and components, including magneto-hydrodynamics; safety investigations of systems and components; numerical models and code development and application; codes coupling methodology; code assessment and validation, including benchmarks; experimental infrastructures design and operation; experimental campaigns and investigations; scaling issue in experiments.
MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.

**Open Access**
Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.

**Author Focus**
Authors and editors profit from MDPI’s over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.

**High Quality & Rapid Publication**
MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.

**High Visibility**
Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), the Verzeichnis lieferbarer Bücher (VLB).

**Print on Demand and Multiple Formats**
MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.

MDPI
St. Alban-Anlage 66
4052 Basel, Switzerland
Tel: +41 61 683 77 34
www.mdpi.com
books@mdpi.com

Learn more ➤ mdpi.com/books