The Institution of Engineering and Technology

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Nuclear Power: An online reading list from the IET Library

These ebooks and ejournals, available via the IET Virtual Library, have been selected to provide an introduction to the topic of nuclear power covering topics such as generation, risk analysis and safety.

theiet.org/virtual-library

Ebooks (provided by EBSCO and Knovel)

Commissioning for Nuclear Power Plants, International Atomic Energy Agency. (2014). This Safety Guide provides recommendations on the basis of international best practices, as currently followed in IAEA Member States, on how to meet commissioning requirements for nuclear power plants.

Nuclear Reactor: Physics and Engineering, John C. Lee. (2020). An introductory text for broad areas of nuclear reactor physics offering information on analysis, design, control, and operation of nuclear reactors.

Safety of Nuclear Power Plants - Design - Specific Safety Requirements, International Atomic Energy Agency. (2016). This publication establishes requirements applicable to the design of nuclear power plants and elaborates on the safety objective, safety principles and concepts.

Nuclear Power Explained, Dirk Eidemüller. (2021). This book explains everything you would want to know about nuclear power. It walks readers through the basics of nuclear physics and radioactivity, the history of nuclear power usage, and the science and engineering behind nuclear power plants.

Who Needs Nuclear Power, Chris Anastasi. (2020). This book provides a balanced and holistic view of nuclear power for both an expert and non-expert audience, and a realistic assessment of the potential for this technology over the critical period to 2050 and beyond.

Nuclear Power Plants: Recent Progress and Future Directions, John K. Compton. (2022). In this volume, recent research on nuclear power plants is presented across four chapters covering a range of topics relating to nuclear power plants in an accessible way.

Seismic Risk Analysis of Nuclear Power Plants, Xie et al. (2019). This book offers a systematic and comprehensive introduction to seismic risk analysis of critical engineering structures focusing on nuclear power plants, with a balance between theory and applications, and includes the latest advances in research.

Electrical Systems for Nuclear Power Plants, Dr. Omar S. Mazzoni. (2018). Written by an authority in the field, this book discusses all aspects of electrical systems for nuclear power plants, making reference to IEEE nuclear standards and regulatory documents.

Construction Technologies for Nuclear Power Plants, International Atomic Energy Agency. (2011). This publication serves as a guide to the tools and steps that support plans for constructing nuclear power plants, and, consequently, improve technical and management skills.

Visions of Energy Futures: Imagining and Innovating Low-Carbon Transitions, Benjamin K. Sovacool. (2019). This book examines the visions, fantasies, frames, discourses, imaginaries, and expectations associated with six state-of-the-art energy systems—nuclear power, hydrogen fuel cells, shale gas, clean coal, smart meters, and electric vehicles.

The Safety Critical Systems Handbook: A Straightforward Guide to Functional Safety: IEC 61508 (2010 Edition), IEC 61511 (2015 Edition) and Related Guidance, David J. Smith and Kenneth G. L. Simpson. (2016). Provides an overview and discussion of safety standards applicable to a wide range of sectors including the operation of nuclear power plants.

Ejournals (provided by EBSCO)

Atomic Energy (Covers a wide range of topics including nuclear chemistry and physics, plasma physics, accelerator characteristics, and reactor economics and engineering.)

Nuclear Plant Journal (Provides technical papers, articles & departments in an effort to develop better methods, systems, products, and services in the nuclear power industry.)

Worldwide Energy (Provides news and information on all types of energy sources and applications including renewables.)

Science and technology of nuclear installations (Aims to make available knowledge on issues related to the nuclear industry and to promote development in the area of nuclear sciences and technologies.)

Journal of Power Technologies (covers the development of turbomachinery, boilers, hydro power, nuclear energy, fuel cells, renewable energy, thermodynamics.)

Energies (Covers topics related to energy sources and systems, including technology development, engineering, energy policy, and energy management.)

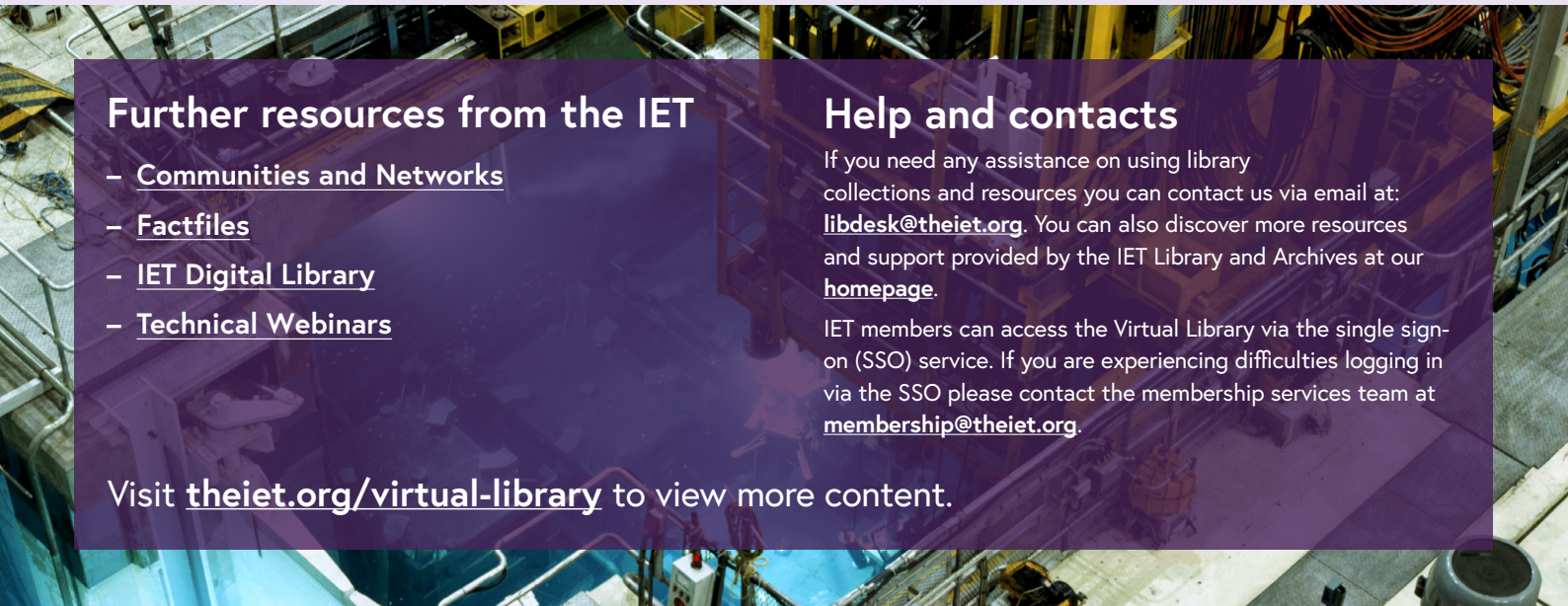
The Energy Journal (Original, refereed articles and shorter papers devoted to the dissemination of knowledge concerning energy and related topics.)

Energy Efficiency (Covers wide-ranging aspects of energy efficiency in the residential, tertiary, industrial and transport sectors.)

Energy & Environment (Explores the direct and indirect environmental impacts of energy acquisition, transport, production and use.)

Energy, Sustainability & Society (Covers various aspects of energy production, energy sources and power generation with a focus on sustainability.)

Energy Science & Engineering (Dedicated to fundamental and applied research on energy and supply and use, this journal aims to facilitate collaboration and spark innovation in energy research and development.)



Further resources from the IET

- Communities and Networks
- Factfiles
- IET Digital Library
- Technical Webinars

Help and contacts

If you need any assistance on using library collections and resources you can contact us via email at: **libdesk@theiet.org**. You can also discover more resources and support provided by the IET Library and Archives at our **homepage**.

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