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Sources of Information on Reliability

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Additional information is available at the end of the chapter

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This appendix gives the names of publishing houses, journals, web servers, and professional bodies related to reliability. The web addresses correspond to December 2015.

1. Books

Useful books on reliability, probability, risk, maintenance, and related subjects are listed in the References in this book. Many others can be found in various libraries. Some books are freely accessible via <http://www.knovel.com>; it is sufficient to write the book name or a keyword into a “search window” there. The primary sources of books on reliability are various publishing houses. Among the best known, the following can be named:

Elsevier Science(<http://www.elsevier.com>)

Springer(<http://www.springer.com>)

John Wiley & Sons(<http://wiley.com>)

Taylor and Francis(<http://www.tandfonline.com>)

2. Journals

The web pages presented below offer information on the reliability-related journals, contents of individual volumes and abstracts, as well as other useful information. For the unsubscribed readers, often it is possible to buy the pertinent article and sometimes even to get free access to the full text via web.

Reliability Engineering & System Safety(www.journals.elsevier.com/reliability-engineering-and-system-safety)

A scientific journal devoted to the development and application of methods for the enhancement of the safety and reliability of complex technological systems. It is published by Elsevier in association with the European Safety and Reliability Association and the Safety Engineering and Risk Analysis Division.

Reliability Edge(<http://www.reliabilitynews.com>)

A journal published four times a year by ReliaSoft Corporation brings articles related to the reliability engineering theories and principles along with useful information on ReliaSoft's upcoming training seminars and product updates.

Reliability HotWire(<http://weibull.com/hotwire/index.htm>)

An Internet journal bringing news from reliability and solutions of various practical problems (see also the title "Weibull" below).

Quality and Reliability Engineering International(<http://www3.interscience.wiley.com/cgi-bin/jhome/3680>) ([http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1099-1638](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1638))

A scientific journal devoted to the problems of quality and reliability. Published by John Wiley & Sons, Ltd.

IEEE Transactions on Reliability(<http://www.ieee.org>, <http://ieeexplore.ieee.org>)

A scientific journal devoted to the principles and practices of reliability, maintainability, and product liability pertaining to electrical and electronic equipment.

IEEE Transactions on Device and Material Reliability(<http://ieeexplore.org/xpl/RecentIssue.jsp?punumber=7928>)

A scientific journal devoted to the reliability of electronic elements.

Microelectronics Reliability(<http://www.journals.elsevier.com/microelectronics-reliability>)

A scientific journal devoted to the reliability of electronic components. Published by Elsevier.

Software Testing, Verification, and Reliability(<http://www3.interscience.wiley.com/cgi-bin/jhome/13635>)

A scientific journal devoted to the problems of testing and reliability of software. Published by John Wiley & Sons, Ltd.

Maintenance Technology(<http://mt-online.com>)

An electronic journal devoted to maintenance.

Maintenance Resources(<http://www.maintenanceresources.com/productsshowcase/index.htm>)

A journal for professionals on reliability and maintenance.

Warranty Week(<http://www.warrantyweek.com>)

The newsletter for warranty management professionals.

3. Internet

The Internet is a very important source. This paragraph presents the links to several servers devoted to reliability and related topics. However, the named sources correspond to the date when this book was published, and changes cannot be excluded (as usual with Internet).

Reliability Web(<http://www.reliabilityweb.com>)

This web contains lot of useful information, including links to the specialized papers on reliability (freely accessible), calendar of events, info on books to buy, or discussion forum.

ReliaSoft Corporation(<http://www.reliasoft.com>)

This corporation offers various software and courses oriented to the automotive industry but not only to this. It also operates the portal <http://www.reliawiki.com>, with useful resources freely downloadable, including comprehensive handbooks, such as Life Data Analysis Reference, Accelerated Life Testing Reference, System Analysis Reference — Reliability, Availability & Optimization, Experiment Design & Analysis Reference, and Reliability Growth Analysis Reference. **Reliawiki** also provides the access to the magazine Reliability HotWire.

Barringer & Associates(<http://www.barringer1.com>)

Consultancy firm offering various courses from reliability area and many interesting texts (including some standards of Military Handbook) and software products, some of them for free. It also offers books for sale.

System Reliability Center(<http://src.alionscience.com>)

The Center provides expert services, information support and education for people engaged in reliability and also a forum for the exchange of information from reliability, information on literature, software tools, standards, publications, and older issues of the journal published by SRC. It operates a Toolbox with answers to many practical problems.

Weibull(<http://www.weibull.com>)

The reliability engineering web site devoted to theory, data analysis, and modelling. It includes sections on life testing, system reliability and maintainability, reliability growth analysis, FMEA and FMECA, reliability-centered maintenance (RCM), and design of experiments (DOE). It also contains the info on books and free access to the magazine *Reliability HotWire* for reliability professionals.

Quanterion Solutions, Inc.(<https://quanterion.com>)

A firm offering (among other products) courses, consulting services, special books on reliability, and downloadable informative texts and data related to various reliability problems.

Maintenance Resources(<http://www.maintenanceresources.com>)

Web pages related to maintenance and maintainability.

Maintenance World(<http://www.maintenanceworld.com>)

A source for reliability and maintenance management and professionals for the exchange of experience. It informs on conferences and courses and contains freely accessible articles dealing with solution of many practical problems related to operation and maintenance.

Plant Maintenance Resource Center(<http://www.plant-maintenance.com>)

A portal for industrial maintenance, informing about issues on maintenance and reliability, including books. It contains many articles devoted to practical problems. Some links, unfortunately, are no more active, as this service was understood as a competition to Google.

Google, Wikipedia, and Wikimedia(<http://www.google.com>, <http://www.wikipedia.com>, <http://www.wikimedia.com>)

Web portals enabling search for information on any topic, including reliability, probability, mathematics, maintenance, and many others.

Information on failure rates

Very important for the assessment of reliability and availability of various appliances and systems are the data on reliability of mass-produced components. Some values of failure rate can be found, for example, in the databases **Electronic Parts Reliability Data** and **Nonelectronic Parts Reliability Data**. The data contained in these databases represent a compilation of field experience in military, commercial, and industrial applications. Both databases were created by Reliability Information Analysis Center (RIAC), originally for the U.S. Department of Defense. Some of the data from the database Electronic Parts Reliability Data (EPRD) are available at <http://theriac.org/productsandservices/products/downloads/content/EPRD%20Sample.pdf>, and some data from the database Nonelectronic Parts Reliability Data (NPRD) are available at <http://theriac.org/productsandservices/products/downloads/content/NPRD-2011Sample-Pages.pdf>.

More comprehensive versions of these databases can be purchased, for example via Quantarion Solutions, Inc., or other providers. Some data on the reliability of electric components can be found in the Military Handbook Reliability Prediction of Electronic Equipment (MIL HDBK 217), 1991 issue; see <http://www.sre.org/pubs/Mil-Hdbk-217F.pdf>.

Note: Some of the data available in the above databases are not “up-to-date” but still contain useful information.

4. Professional bodies

European Safety and Reliability Association (ESRA)(<http://www.esrahomepage.org>)

A nonprofit professional organization aimed at the advancement of safety and reliability technology in all areas. It informs on various activities and conferences, publishes ESRA Newsletters, and organizes the annual European Safety and Reliability Conference ESREL.

European Safety, Reliability & Data Association (ESReDA)(<http://www.esreda.org>)

This Association provides a forum for the exchange of information, data, and current research in Safety and Reliability.

International Association for Probabilistic Safety Assessment and Management(<http://www.iapsam.org>)

The main purpose of IAPSAM is to sponsor and oversee the organization of the International Conferences on Probabilistic Safety Assessment and Management (PSAM).

IEEE Reliability Society(<http://www.ieee.org/portal/site/relsoc>)

A division of the important professional organization IEEE publishes Transactions on Reliability and other journals; organizes international symposia on reliability, availability, quality, and system safety; and informs on various events, standards, and literature.

American Society for Quality, Reliability Division(<http://asq.org/reliability>)

A section for reliability within the American Society for Quality. It informs on various activities, conferences, literature, journals, newsletters, and courses.

Safety Engineering and Risk Analysis Division (SERAD)(https://community.asme.org/safety_engineering_risk_analysis_division/w/wiki/3574.about.aspx)

A division of the American Society for Mechanical Engineers (ASME), which stimulates an interest in risk analysis and safety information applied to mechanical engineering.

Society of Automotive Engineers, Reliability, Maintainability, Supportability, and Logistics Division (G-11)(<http://www.sae.org/standardsdev/aerospace/g11.htm>)

A division of SAE providing an industry/government forum to review RMS technology and its interfaces with logistics support, engineering design and development, maintainability, reliability, and diagnostics, especially for automotive and aerospace industries.

Safety and Reliability Society(<http://www.sars.org.uk>)

International professional organisation. Among other activities, it publishes a quarterly journal *Safety and Reliability*, each volume devoted to certain topic.

Society for Maintenance and Reliability Professionals(<http://www.smrp.org>)

A U.S./international nonprofit professional society aiming at the advancement of reliability and physical asset management industry. It is valuable for practitioners looking to expand their knowledge and skills in maintenance and reliability and build business connections with other professionals.

Society of Reliability Engineers(<http://www.sre.org>)

A professional society. The web site contains info on activities, articles, and references.

In addition to those mentioned above, national organizations for reliability and quality exist in various countries and can be found via the Internet. An example follows.

Czech Society for Quality, Reliability Section(<http://www.csq.cz>)

CSQ is an association bringing together individuals and organizations engaged in quality management, reliability, risk and security, environmental management, automotive industry, technical standardization, and others. The special sections organize courses and seminars and publish the corresponding materials (mostly in Czech language).

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