

— READINGS IN SYSTEM SAFETY —

Bibliographies for the System Safety Engineer

The bibliographies that follow are broken into four topic areas to make their use easier:

- **Readings in System Safety** — *Texts dealing specifically with the discipline of system safety practice.*
- **Readings in Risk Analysis** — *Texts devoted to the more general arena of risk, its definition, and its recognition and management.*
- **Readings in Fault Tree Analysis** — *Texts pertinent to the specialized field of quantitative analysis using logic tree methods and leading to probabilistic risk assessment.*
- **Readings in Human Factors** — *Texts dealing with human operator aspects of system hazard analysis and risk assessment.*

The texts are arranged within each of these four categories not according to any implied order of quality or of preference, but alphabetically by the names of principal authors. Some texts meaningfully treat more than one of the disciplines and appear in several topic areas.

— READINGS IN SYSTEM SAFETY —

- Annotated Bibliography for the System Safety Engineer -

- **System Safety Program Requirements** — MIL-STD-882C. The most frequently cited military contract requirements document related to the practice of system safety. — 1993 — Soft cover; large format; 133 pp.
- **PRA Procedure Guide** — NUREG/CR-2300. A guide to performing Probabilistic Risk Assessments for nuclear power plants, prepared under the auspices of the American Nuclear Society and the Institute of Electrical and Electronics Engineers, this work presents concepts of value both inside and outside the nuclear power industry. — 1983 — Government Printing Office; Soft cover; large format; two volumes; 698 pp.
- **The Loss Rate Concept in Safety Engineering** — R. L. Browning. A treatise on managing risk through (1) appreciating the rate at which losses occur for given hazards/systems and (2) imposing countermeasures to control hazards for which the rate is found to be unacceptable. Methods of judging acceptability are discussed, and societal acceptance levels are suggested as foundation values. Detailed presentations of the fault tree method and practical examples are included. — 1980 — Marcel Dekker; Hard cover; 162 pp. (ISBN 0-8247-1249-8)
- **Guidelines for Hazard Evaluation Procedures** (Second Edition with Worked Examples) — Center for Chemical Process Safety. A compendium of methods used to identify and assess hazards found in process operations or activities. Although structured around the needs of the chemical process industry, contents are applicable in a broad cross section of settings. Strategies, techniques, and examples for performing hazard evaluation studies in industry are provided. Useful as an aid in training hazard analysts and as a reference for experienced practitioners. — 1992 (2nd Edition) — Center for Chemical Process Safety of the American Institute of Chemical Engineers; Hard cover; 461 pp. (ISBN 0-8169-0491-X)
- **Guidelines for Chemical Process Quantitative Risk Analysis** — Center for Chemical Process Safety, Risk Assessment Subcommittee. A comprehensive introduction to a broad range of state-of-the-art techniques of quantitative risk assessment, with numerous practical worked examples. The techniques are of value in a broad range of enterprises other than chemical processing. Methods for measuring risk, and data sources for risk evaluations are also presented. — 1989 — Center for Chemical Process Safety of the American Institute of Chemical Engineers; Hard cover; 585 pp. (ISBN 0-8169-0402-2)
- **Engineering Reliability — New Techniques and Applications** — B. S. Dhillon and C. Singh. A thorough discourse on the mathematics of probability theory and the relationship between reliability and failure probability. Human reliability (failure probability) is discussed, and fault tree analysis is presented in great depth. — 1981 — John Wiley & Sons; Hard cover; 339 pp. (ISBN 0-471-05014-8)

- **System Engineering “Toolbox” for Design-Oriented Engineers** — B. E. Goldberg, et al. A compendium of methods dealing both with hazard recognition/risk assessment and with reliability engineering, this work describes a broad spectrum of analytical techniques. For each technique, the authors present a working level description, advice on applications, application procedure, examples, a description of advantages and limitations, and a bibliography of other resources. — 1994 — NASA Reference Publication 1358; Soft cover; large format; 303 pp.
- **Handbook of System and Product Safety** — Willie Hammer. Long regarded as a leading definitive treatise on system safety, its practice, and its methods. Many examples, and useful tables. — 1972 — Prentice-Hall; Hard cover; large format; 351 pp. (ISBN 0-13-382226-5)
- **Designing for Reliability and Safety Control** — Ernest J. Henley and Hiromitsu Kumamoto. Specifically aimed at the needs of the practicing designer, this book introduces a variety of largely numerical analytical techniques and demonstrates their application to practical problems. Among the techniques are: fault tree analysis, digraph analysis, technique for human error rate prediction (THERP), and the use of truth tables. — 1985 — Prentice Hall; Hard cover; 527 pp. (ISBN 0-13-201229-4)
- **Reliability Engineering and Risk Assessment** — Ernest J. Henley and Hiromitsu Kumamoto. Principles of risk assessment are presented and the mathematical structures of the fault tree and the event tree are developed. Both data-based objective cases and data-void subjective cases, which require the exercise of engineering judgment in making probability determinations, are included. Many example analyses are presented. — 1981 — Prentice Hall; Hard cover; 568 pp. (ISBN 0-13-772251-6) (Published also by the Institute of Electrical and Electronics Engineers under the title **Probabilistic Risk Assessment**)
- **MORT Safety Assurance Systems** — W. G. Johnson. The definitive reference on Management Oversight and Risk Tree analysis. Other methods useful in the practice of system safety are also described. — 1980 — Marcel Dekker (Published in cooperation with the National Safety Council); Hard cover; 525 pp. (ISBN 0-8247-6897-3) (ISBN 0-8247-6897-3)
- **Systems Safety Including DOD Standards** — Donald M. Layton. This book is a resource document for a self-study course on system safety as it applies to activities within the Department of Defense. Apart from direct references to acquisitions of services and materials under contract, formal life cycle phases, and MIL-STD-882B, the information contained in the book is generally applicable to any program of system safety engineering and management. — 1989 — Weber Systems, Inc.; Soft cover; 166 pp. (ISBN 0-938862-64-2)

- **Loss Prevention in the Process Industries** — F. P. Lees. Monumentally important, tutorially prepared, and globally thorough exposition of risk assessment and reliability engineering principles and techniques, generously laced with case studies. — 1983 — Butterworths; Hard cover; two volumes; 1316 pp. (ISBN 0-408-10604-2)
- **Safeware — System Safety and Computers** — Nancy G. Leveson. An especially learned treatment of system safety viewed as a discipline to be applied in practical ways to the resolution of problems in discovering and managing risk. Fundamentals are treated in depth (e.g., the concept of causality). Analytical methods are presented, and their relative advantages and shortcomings are discussed. The importance of the role of software is emphasized, and problems in developing software risk assessments with reasonable confidence are discussed. Appendices analyze disasters and include a detailed treatment of the six Therac-25 massive overdose cases. — 1995 — Addison-Wesley; Hard cover; 680 pp. (ISBN 0-201-11972-2)
- **System Safety: Technology and Application** — Sol W. Malasky. A treatise on the design of the system safety program and its management elements, followed by a discussion of hazard analysis methods. Fault tree analysis is taken up in detail (three chapters) , and a treatment of uncertainties in probability analysis concludes the text. — 1982 — Garland Press; Hard cover; 329 pp.
- **Assurance Technologies — Principles and Practices** — Dev G. Raheja. Directed to design engineers at all levels of expertise, this volume devotes separate chapters to each of the product/system assurance technologies — i.e.: reliability engineering, maintainability engineering, system safety engineering, quality assurance engineering, logistics support engineering, human factors engineering, software performance assurance, and system effectiveness. (Introductory material provides background information on the influence of the assurance technologies on profits and on statistical concepts.) The treatment of each topic provides both an overview and in-depth, detailed coverage, with carefully selected illustrative examples. — 1991 — McGraw-Hill, Inc.; Hard cover; 341 pp. (ISBN 0-07-051212-4)
- **Introduction to System Safety Engineering** — W. P. Rogers. A seminal work. Included are an introduction to the Preliminary Hazard Analysis method (with examples) and brief (embryonic) guidance on fault tree analysis. An appendix includes the original version (15 July 1969) of MIL-STD-882. — 1971 — John Wiley and Sons; Hard cover; 130 pp.
- **System Safety Engineering and Management** — Harold E. Roland and Brian Moriarty. A comprehensive overview of system safety program construction and its management elements, followed by an elementary presentation of probability theory, statistical measures, and distributions. Several system safety analysis methods are described briefly. The fault tree method is treated in detail. — 1990 (2nd Edition) — John Wiley & Sons; Hard cover; 367 pp. (ISBN 0-471-61816-0)

- **System Safety Analysis Handbook** — Richard A. Stephans and Warner W. Talso (Editors). A comprehensive reference source detailing 90 system safety analytical methods and techniques and providing voluminous information on such related matters as system safety data sources, process safety management, training sources, types and sources of risk assessment software, and index guides both to OSHA General Industry Standards and to fire safety references. — 1993 — The System Safety Society (New Mexico Chapter); Loose leaf binder; 486 pp.
- **System Safety 2000** — Joe Stephenson. A brief account of the history of system safety is followed by an outline of the fundamentals of system safety practice. Program planning and management are covered, as are analytical methods. — 1991 — Van Nostrand Reinhold; Hard cover; 318 pp. (ISBN 0-442-23840-1)
- **Basic Guide to System Safety** — Jeffrey W. Vincoli. Designed as an introductory survey and a true “primer,” this book is written to introduce practitioners in other areas of the safety profession to the realm of system safety principles and practice. Management concepts and analytical methods are both covered in broad, overview form. — 1993 — Van Nostrand Reinhold; Hard cover; 208 pp. (ISBN 0-442-01275-6)

EXAMPLE RELATED TEXTS:

- **What Went Wrong? — Case Histories of Process Plant Disasters** — Trevor A. Kletz. An anthology of case histories of chemical process plant catastrophies, with analyses of causes. The material is organized in a way which aids the plant designer or operator in recognizing and controlling the threat of disaster — e.g., the Flixboro case is taken up in a chapter on hazards of plant modifications, and Three Mile Island appears in a chapter devoted to accidents caused by human error. — 1989 (Second Edition) — Gulf Publishing Company; Hard cover; 238 pp. (ISBN 0-87201-9195)
- **Normal Accidents — Living with High-Risk Technologies** — Charles Perrow. This text puts forward the hypothesis that, given the characteristics of systems, and whether or not they incorporate safety features, multiple and unexpected interactions of failures and faults are inevitable. And catastrophies are therefore, “normal.” The author characterizes systems according to two sets of properties: (1) “Interactions,” which may be linear or complex, and (2) “Coupling,” which may be tight or loose. Numerous examples are drawn in the context of these properties, e.g., dams (tight/linear), the Department of Energy (loose/complex), and DNA research (tight/complex). Many case histories are given to support the analytical hypothesis. — 1984 Basic Books, Inc.; Soft cover; 386 pp. (ISBN 0-465-05142-1)

TECHNICAL SOCIETIES, JOURNALS, and CERTIFICATION BOARD:

- The System Safety Society / Journal: *Hazard Prevention*
P.O. Box 70
Unionville, VA 22567-0070

(540) 854-8630

- The Society for Risk Analysis / Journal: *Risk Analysis*
8000 Westpark Drive
Suite 400
McLean, VA 22102

(703) 790-1745

- *Journal of Risk and Uncertainty*
Kluwer Academic Publishers
101 Philip Drive
Assinippi Park
Norwell, MA 02061

- Board of Certified Safety Professionals
208 Burwash Avenue
Savoy, Illinois 61874

(217) 359-9263

— READINGS IN RISK ANALYSIS —

- Annotated Bibliography for the System Safety Engineer -

- **Safety Second** — Michelle Adato, et al. A critique of the Nuclear Regulatory Commission, in which the Union of Concerned Scientists points to shortcomings in the implementation of policies intended to ensure safe operation of nuclear power plants. The events surrounding the Three Mile Island mishap are the chief focal point. — 1987 — Indiana University Press; Hard cover; 194 pp. (ISBN 0-253-35034-4)
- **Guidelines for Chemical Process Quantitative Risk Analysis** — Center for Chemical Process Safety, Risk Assessment Subcommittee. A comprehensive introduction to a broad range of state-of-the-art techniques of quantitative risk assessment, with numerous practical worked examples. The techniques are of value in a broad range of enterprises other than chemical processing. Methods for measuring risk, and data sources for risk evaluations are also presented. — 1989 — Center for Chemical Process Safety of the American Institute of Chemical Engineers; Hard cover; 585 pp. (ISBN 0-8169-0402-2)
- **Acceptable Risk** — Baruch Fischhoff, et al. Needs for risk recognition and assessment are expressed, and both individual and societal attitudes toward risk are described. Three approaches to resolving risk acceptance problems are set forth: Professional Judgment, in which subjectively based decisions are made by knowledgeable experts; Bootstrapping, in which proposed risks are compared to other risks to which exposure already exists; Formal Analysis, in which cost-benefit tradeoffs are rigorously evaluated. — 1981 — Cambridge University Press; Soft cover; 185 pp. (ISBN 0-521-27892-9)
- **High Risk Safety Technology** — A. E. Green (Editor). Techniques for the quantitative evaluation of risk are described, with special emphasis on those cases where the loss penalty is extremely severe, and it is therefore essential to ensure that the probability component of risk is acceptably low. Separate sections of the book deal with: Safety Assurance; Safety Technology in Industry; Specific Hazards; and Future Aims. — 1982 — John Wiley & Sons; Hard cover; 654 pp. (ISBN 0-471-10153-2)
- **Dealing with Risk** — Richard F. Griffiths (Editor); The central theme of this book is the acceptability of risk, as distinct from the process of risk assessment. In that context, benefits — and their accompanying risks — are viewed in relation to human needs. — 1981 — John Wiley & Sons; Soft cover; 144 pp. (ISBN 0-470-27341-0)
- **Reliability Engineering and Risk Assessment** — Ernest J. Henley and Hiromitsu Kumamoto. Principles of risk assessment are presented and the mathematical structures of the fault tree and the event tree are developed. Both data-based objective cases and data-void subjective cases, which require the exercise of engineering judgment in making probability determinations, are included. Many example analyses are presented. — 1981 — Prentice Hall; Hard cover; 568 pp. (ISBN 0-13-772251-6) (Published also by the Institute of Electrical and Electronics Engineers under the title **Probabilistic Risk Assessment**)

- **Engineering Risk and Hazard Assessment** — Abraham Kandel and Eitan Avni (Editors). These volumes deal with such issues as short- and long-term hazards, setting priorities in safety, fault analysis for process plants, hazard identification and safety assessment of human-robot systems, plant fault diagnosis expert systems, knowledge- based diagnostic systems, fault tree analysis, modeling of computer security systems for risk and reliability analysis, risk analysis of fatigue failure, fault evaluation of complex systems, probabilistic risk analysis, and expert systems for fault detection. — 1988 — CRC Press; Hard cover; two volumes; 282 pp. (ISBN 0-8493-4655-X)
- **Probabilistic Risk Assessment and Management for Engineers and Scientists** — Hiromitsu Kumamoto and Ernest J. Henley. Analysis and synthesis methods for risk studies are developed from fundamental principles and applied to practical industrial problems. Quantitative techniques — kinetic tree theory, cut set, and prime implicant analysis and Markov and Monte Carlo methods — are covered in detail. A full treatment of qualitative methods is included: failure modes and effects analysis, event trees, cause-consequence analysis, and common-mode failure analysis. — 1996 (Second Edition) — IEEE Press; Hard cover, 597 pp. (ISBN 0-7803-1004-7)
- **Risk Assessment and Management** — Lester B. Lave (Editor). This is a collection of carefully selected papers from the 1985 annual meeting of the Society for Risk Analysis. Many of the papers have since come to be recognized as having landmark significance. The volume is compartmented into subject areas dealing with: Estimating Health Risks; Estimating Safety Risks; and Perceptions and Behavior. — 1987 — Plenum Press; Hard cover; 740 pp.
- **Technological Risk** — H. W. Lewis. A layman's level introduction to a broad range of risk considerations that arise out of the high-tech nature of today's world and the ever-present societal pressures for freedom from risk. Chapters deal with such topics as measuring risk, risk perception, the politics of risk, risk assessment and management, the value of human life, and risk acceptance. Specific issues dealt with include hazardous chemicals, highway and air transport safety, radiation, and fossil fuels. — 1990 — W. W. Norton and Company; Soft cover; 353 pp. (ISBN 0-393-02883-6)
- **Of Acceptable Risk** — William W. Lowrance. A useful primer, written in the language of the layman, with numerous real-life case histories presented to reinforce concepts. — 1976 — William Kaufman, Inc.; Hard cover; 180 pp. (ISBN 0-913232-30-0)
- **An Anatomy of Risk** — William D. Rowe. A profound, sweepingly broad, deeply technical treatment of the topic. — 1977 — John Wiley & Sons; Hard cover; 488 pp. (ISBN 0-471-01994-1)
- **Societal Risk Assessment** — R. C. Schwing and W. A. Albers, Jr. An edited compendium of contributions dealing with risk perception and acceptability, with emphasis on societal perspectives. — 1980 — Plenum Publishing Corp.; Hard cover; 374 pp. (ISBN 0-306-40554-7)

- **Low-Probability High-Consequence Risk Analysis** — Ray A. Waller and Vincent T. Covello (Editors). A specialized and difficult area of risk assessment is that of analyzing risks with combined characteristics of very low probability and very severe consequences, particularly in terms of population impact. This book reports on a symposium which addressed this specific problem from the perspectives of modeling of such systems and the statistical methodology used in such analyses. A number of case studies are presented. — 1984 — Plenum Press; Hard cover; 571 pp.
- **De Minimis Risk** — Chris Whipple (Editor). This volume contains the papers presented at a 1985 workshop held to explore the legal, ethical, social, scientific, and practical aspects of the use of the de minimis risk concept for health and safety regulation. Workshop sponsors were the society for Risk Analysis, the Environmental Protection Agency, the Nuclear Regulatory Commission, and the Electric Power Research Institute. — 1987 — Plenum Press; Hard cover; 208 pp. (ISBN 0-306-42530-0)
- **Searching for Safety** — Aaron Wildavsky. This exposition argues persuasively that risk taking ultimately makes life safer. It argues also that there is high risk in an overly conservative approach to risk acceptance. A wide range of topics is covered, including how the human body, plants, animals, and insects cope with risk. — 1988 — Transactions Publishers; Soft cover; 253 pp. (ISBN 0-912051-18-3)

— **READINGS IN FAULT TREE ANALYSIS** —
- Annotated Bibliography for the System Safety Engineer -

- **Reliability and Fault Tree Analysis Guide** — SSDC-22 — P. A. Crosetti. A beginners' guide with minimum mathematics, using the lambda-tau method to produce combinatorial analysis. — 1982 — Department of Energy Document No. DOE 76-45/22; Soft cover; large format; 147 pp.
- **Engineering Reliability — New Techniques and Applications** — B. S. Dhillon and C. Singh. Fault tree analysis is presented in the context of network analysis. Its relationship to the classical reliability engineering techniques is shown. — 1981 — John Wiley & Sons; Hard cover; 339 pp. (ISBN 0-471-05014-8)
- **Nuclear Systems Reliability Engineering and Risk Assessment** — J. B. Fussell and G. R. Burdick. A compendium of papers providing mathematically profound, in-depth treatment. — 1977 — Society for Industrial and Applied Mathematics; Hard cover; 849 pp.
- **Handbook of System and Product Safety** — Willie Hammer. A brief overview of the technique, including its application, advantages and shortcomings is found in this monumental treatise (p 238 et seq.). — 1972 — Prentice Hall; Hard cover; large format; 351 pp. (ISBN 0-13-382226-5)
- **Reliability Engineering and Risk Assessment** — Ernest J. Henley and Hiromitsu Kumamoto. The fault tree method is dealt with in depth, as are allied deductive logic methods. Variations in application strategy are presented, and many examples are shown. —1981 — Prentice Hall; Hard cover; 568 pp. (ISBN 0-13-772251-6) (Published also by the Institute of Electrical and Electronics Engineers under the title **Probabilistic Risk Assessment**)
- **Fault Tree Analysis Application Guide** — David J. Mahar and James W. Wilbur. A practical guide to determining the need for fault tree analysis and applying the technique. Includes applicable aspects of Boolean algebra and probability theory. Three practical examples of fault tree analysis application are provided. — 1990 — Reliability Analysis Center, Rome Air Development Center; Soft cover; 179 pp.
- **System Safety: Technology and Application** — Sol W. Malasky. Fault tree analysis is treated in three chapters. Other chapters are devoted to alternate hazard analysis methods and to the overall approach to system safety program planning and administration. — 1982 — Garland Press; Hard cover; 329 pp.
- **System Safety Engineering and Management** — Harold E. Roland and Brian Moriarty. The fault tree method is treated in detail, as are the inductive analysis methods. Introductory chapters deal with system safety program construction and management. — 1990 (2nd Edition) — John Wiley & Sons; Hard cover; 367 pp. (ISBN 0-471-09695-4)

- **Fault Tree Handbook** — NUREG-0492 — W. E. Vesely, et al. A complete treatment of fault tree principles. Written for the beginner, the text progresses gradually to a full presentation of the more complex nuances. A succinct overview of other analytical methods is provided as background information. Many practical examples are provided. — 1981 — Government Printing Office; Soft cover; 185 pp.

— FAULT TREE SOFTWARE —

- **FaultREASE** — Developed and marketed by Arthur D. Little, Inc. Supports creating, editing, drawing and analyzing fault trees. (Macintosh and Windows versions)
- **Integrated Reliability and Risk Analysis System (IRRAS-PC)** — Developed by EG&G at the Idaho National Engineering Laboratory for the US Nuclear Regulatory Commission. Available at no cost to US government agencies. Provides support both for creating and for analyzing fault trees. (IBM-PC/XT/AT or compatible)
- **Comprehensive Automated Fault Tree Analysis (CAFTA)** — A product of the Electric Power Research Institute. An enhanced version (CAFTA+) is available from Science Applications International Corp. (IBM-PC/XT/AT or compatible)
- **Integrated Reliability Interactive System (IRIS)** — Marketed by Babcock & Wilcox. Provides support both for creating and for analyzing fault trees. (IBM-PC/XT/AT or compatible)

— READINGS IN HUMAN FACTORS —

- Annotated Bibliography for the System Safety Engineer -

- **Human Engineering Design Criteria for Military Systems, Equipment and Facilities** — MIL-STD-1472D. A frequently cited military contract design criteria document related to the practice of human engineering. Covered are visual displays, audio displays, controls, labeling, anthropometry, workspace design, and environment. — 1989 — Soft cover; large format; 388 pp.
- **Human Factors Engineering Design for Army Materiel (Metric)** — MIL-HDBK-759A. A handbook of human factors engineering design data and detailed criteria, assembled as a reference to provide guidance to designers of Army materiel, and broadly applicable to many other fields as well. — 1981 — Soft cover; large format; 677 pp.
- **A Procedure for Conducting a Human Reliability Analysis for Nuclear Power Plants** — NUREG/CR-2254 — B. J. Bell and A. D. Swain. A detailed procedure is presented, to be followed in conducting a human reliability analysis as part of a probabilistic risk assessment. An overview of the procedure describes the major elements of a human reliability analysis, along with a detailed description of each element. An example of an actual analysis is presented. — 1983 — Government Printing Office; Soft cover; large format; 120 pp.
- **Human Factors Design Guidelines for Maintainability of Department of Energy Nuclear Facilities** — UCRL-15673 / PSA 4312705 — James P. Bongarra, Jr. et al. Maintainability design concepts are presented which are applicable in a broad range of industrial settings. Many practical examples are given and are graphically illustrated. — 1985 — Lawrence Livermore National Laboratory; Soft cover; large format; 161 pp.
- **Behavioral Reliability Program for the Nuclear Industry** — NUREG/CR-2076 — J. C. Buchanan, S. O. Davis and M. D. Dunnette. Behavioral reliability criteria are set forth and standards are presented for a behavioral observation program to detect indications of emotional instability in employees in critical work assignments. Emphasis is placed on characteristics observable and assessable by supervisors and peers. — 1981 — Government Printing Office; Soft cover; large format; 272 pp.
- **Guidelines for Preventing Human Error in Process Safety**— Center for Chemical Process Safety. A comprehensive presentation of practical guidance directed toward controlling human error as a contributor to mishaps. Topics dealt with include factors affecting human performance and error, methods for predicting and reducing error, case studies, solutions to specific human error problems at the plant level, and a systematic approach for implementing an integrated process safety management system. — 1994 — Center for Chemical Process Safety of the American Institute of Chemical Engineers; Hard cover; 390 pp. (ISBN 0-8169-0461-8)

- **Human Reliability with Human Factors** — Balbir S. Dhillon. Largely numerical methods of analysis are presented to deal with predicting human reliability in such settings as manufacturing, computer operations, traffic, and military operations. Early material covers the mathematics and reliability techniques used throughout the remainder of the text. — 1986 — Pergamon Books; Soft cover; 239 pp.
- **Human Reliability and Safety Analysis Data Handbook** — David I. Gertman and Harold S. Blackman. A broadly based, scholarly treatment of the overall field of human reliability/error probability. Methods for conducting analyses are presented and illustrated. Data sources are listed, and example quantitative data from many sources are presented. Numerous case studies appear. Behavior mechanisms underlying human error are dealt with. An overview of the state of the art is presented, along with a statement of practical needs for future advances. — 1994 — Wiley; Hard cover; 448 pp. (ISBN 0-471-59110-6)
- **Annotated Bibliography of Human Factors Applications Literature** — UCRL-15674 / PSA 4312705 — Denise B. McCafferty, et al. This compendium presents more than 270 titles and abstracts of publications relating to human factors. Topic areas covered include: Job Performance Aids, Control Room Design, Emergency Planning and Response, Maintenance and Reliability, Annunciators/Alarms, Displays & Controls, Simulators, Procedures Preparation, Training, and Anthropometry — 1984 — Lawrence Livermore National Laboratory; Soft cover; large format; 314 pp.
- **Human Factors in Engineering and Design** — Mark S. Sanders and Ernest J. McCormick. Elements of industrial psychology and engineering are drawn together in chapters dealing with presenting information to the human operator, human output and control, work space arrangement, environmental influences, and error inducing phenomena. — 1987 — McGraw-Hill; Hard cover; 664 pp. (ISBN 0-07-044903-1)
- **The Human Element in Systems Safety** — Alan D. Swain. The approach is taken that safety in systems that include human operators is a design problem — one to be resolved by objective engineering techniques. A work situation approach is described, in which the work force identifies accident-prone situations in their work and offers suggestions for improving the safety-proneness of the work operations with which they are familiar. Many practical examples are given. — 1974 — InComTec (Industrial and Commercial Techniques, Ltd.); Soft cover; large format; 77 pp.
- **Handbook of Human Reliability Analysis with Emphasis on Nuclear Power Plant Applications** — NUREG/CR-1278 — A. D. Swain and H. E. Guttmann. This handbook presents methods, models, and estimated human error probabilities to enable quantitative or qualitative assessments of occurrences of human errors that may effect the availability or operational reliability of engineered safety features and components in nuclear power plants. The methods are readily adaptable to other system types, and they support global probabilistic risk assessments. Tables present many useful data, e.g., human error probabilities for a wide variety of tasks. — 1983 — Government Printing Office; Soft cover; large format; 643 pp.