Management Auditing of Computer Operations

Text and References for a Tutorial

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These tutorial notes and references are intended to describe the continuing need for conducting management audits of computer operations. All too frequently managers lose sight of the real impact a computer has on the entire operations of their organizations. The costs of acquiring, installing, and operating a computer represent only the tip of the iceberg normally visible to management. Consequently, managers must begin to more fully comprehend the influence the computer has on their ability to manage the whole organization.

In the past most computers were used for administrative support functions such as accounting, payroll, and inventory control. Although these functions are important, using the computer to help an organization achieve its goals and objectives is even more important.

As managers install more and more computers and learn to use them for organizational rather than administrative purposes the opportunity for abuse increases sharply.

These subjects as well as others are covered in detail in tutorial notes which consist of 36 pages of original lecture notes and 436 pages of reprints of 31 articles.

This tutorial is available for Computer Society Chapters. For further information contact Prof. Oscar N. Garcia, Department of Electrical & Electronics Systems, University of South Florida, Tampa, FL 33620. Telephone 813-974-2948.

The tutorial notes are available at $12 for members of the IEEE Computer Society and $16 for non-members.

Please ship a copy of the Management Auditing of Computer Operations Tutorial notes. $_________ is enclosed.

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Mail order for tutorial notes to

IEEE Computer Society
5855 Naples Plaza, Suite 301-C
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Just Out...

The symposium covers the theory and practice of computer structures and digital system organization. Topics include architecture evolution, hardware descriptive languages, multi-microprocessors, performance evaluation and modeling, applications, hardware/software system considerations, resource sharing and process coordination, recent results, networks, architectures to support software concepts, architectural features for performance enhancement, and secondary storage.

Non-members—$20.00 Members—$15.00

1975 Conferences

Contains 37 papers from sessions on mathematical foundations of computer arithmetic, control and monitoring of precision, number systems, residue arithmetic and error control, arithmetic algorithms and their analysis, case studies of arithmetic processor design, ultra high speed arithmetic for special purpose, and parallelism and array logic.

Non-members—$20.00 Members—$15.00

Topics: programming languages, programming methodology, minicomputer systems and architecture, reliability and diagnosis, scheduling and memory management, sequencing and allocation problems, data bases, artificial intelligence, meta-theory, and program testing.
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The sixth in a series of annual meetings, the 1975 symposium focused on memory testing with the added dimension of memory reliability, devoted a full day to the subject of microprocessors, presented new information on test techniques and test equipment, and included a presenta-
tion on linear operational amplifier testing using automatic equipment.
Non-members—$16.00 Members—$12.00

Formerly called the Annual Symposium on Switching and Automata Theory, this symposium featured sessions on analysis of algorithms, computational complexity, formal languages, mathematical theory of computation, switching and automata theory, theory of programming, compiling, and formal semantics.
Non-members—$20.00 Members—$15.00

Fourth Data Communications Symposium, October 7-9, 1975—180 pp.
The theme of this symposium was "Network Structures in an Evolving Operational Environment." The subjects covered were network topological design considerations, measurement and performance, communications software, network design considerations, security, computer communication standards, interface considerations, and legal and regulatory aspects.
Non-members—$20.00 Members—$15.00
Hardbound—$23.50; member—$18.50

Conference record of the combined meeting of the 1975 IEEE Conference on Engineering in the Ocean Environment and the 11th Annual Meeting of the Marine Technology Society contains papers in 28 different categories. Included are computers, information systems, instrumentation, remote sensing, and all aspects of marine technology.
Non-members—$26.00 Members—$21.00
Also Available Now: OCEAN 74 (hardbound only), non-members, $26.00, members, $19.50; OCEAN 73, non-members, $20.00, members, $15.00.

"MICRO-8." Papers presented at the Eighth Annual Workshop on Microprogramming, September 21-23, 1975
Includes sessions on microprogramming architecture, microprogram optimization, LSI microprogram sequencers, microprogrammed microprocessors, microprogram performance evaluation, emulation, and software, as well as one on the significance, benefits, and pitfalls of microprogramming.
Non-members—$12.00 Members—$9.00

Software engineering is an emerging field for managing growth and change in data processing and realtime control of physical processes. This conference, which sought to present actual experiences of real gains in productivity and quality, included sessions on concepts, tools, project control, experience, and methodology.
Non-members—$8.00 Members—$6.00
Hardbound—$11.50; members—$9.50

"How to Make Computers Easier to Use," Digest of Papers from Compon 75 Fall, September 9-11, 1975
Intelligent terminals, displays, problem-oriented languages, idiot-proof systems—they all help to make the computer easier to use. Trading off the dollar and performance penalties of these devices and techniques is one of the most important tasks facing the computer system designer today. Sessions at this conference addressed this important theme in terms of systems, software, hardware, and combinations of these disciplines.
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"Protection of Information in Computer Systems," Tutorial from Compon 75 Fall, September 8, 1975
The course covers the basic principles of information protection and explains the separation of addressing and protection, the capability system, the access-control list system, protecting various types of objects, and protected objects and subsystems.
Non-members—$12.00 Members—$9.00
Hardbound—$15.50; members—$12.50

"Structured Programming," Tutorial from Compon 75 Fall, September 8, 1975
This tutorial introduces an introduction to the major ideas of structured programming, their theoretical and practical foundations, as well as detailed presentations of a major application program system and a single program stressing the top-down evolutionary character of the process.
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Papers presented in this symposium cover the areas of new CHDLs, compilation and simulation driven by CHDLs, CHDLs in design automation, and applications of CHDLs, as well as structured description of digital systems. In addition there are tutorial sessions dealing with analysis and synthesis of a system and a session presenting recent results and new concepts which are not yet fully developed.
Non-members—$16.00 Members—$12.00

Contains 28 papers on structures in cellular automata, properties of maps in cellular space, L-systems and other biology-based theories, applied theory of cellular logic, and some problem-oriented theories. Also includes a classified bibliography on cellular automata theory focusing on recent Japanese references.
Non-members—$16.00 Members—$12.00

Includes four invited papers and 53 papers from sessions on multiprocessors, processor/memory interconnections, associative/parallel processors, program decomposition and Petri nets, STARAN, memory organization, languages, compiling techniques, operating systems, image processing, data flow architecture, algorithms and applications, and performance evaluation.
Non-members—$20.00 Members—$15.00

Papers cover a broad range of design automation topics including testing, simulation, physical design, software design automation, design automation systems design, and architectural design automation.
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Topics include diagnosis of digital circuits and systems, reliability modeling and analysis, design and implementation of fault-tolerant systems, reliable software, probabilistic analysis of test methods, and fault-tolerant sequential circuits and machines.
Non-members—$20.00 Members—$15.00

This popular one-day symposium focuses on practical experiences with a network and new research results. Papers cover a wide range of topics including resource sharing and management, performance evaluation and cost, software and hardware reliability, security, user or system access to a network, private or value added networks, and transportable software.
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