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Salem Press Announces the Fourth Volume in A Brand-New Series, *Principles of Computer Science*

Salem Press is pleased to add *Principles of Computer Science* as the fourth title in a new *Principles of* series that includes *Chemistry, Physics, Astronomy, and Computer Science*. This new resource introduces students and researchers to the fundamentals of computer science using easy-to-understand language, giving readers a solid start and deeper understanding and appreciation of this complex subject.

Edited by Donald R. Franceschetti, PhD from *The University of Memphis*, this reference work begins with a comprehensive introduction to the field, starting with the development of the first computers, an explanation of analog versus digital computing, neural networks, the contributions of Alan Turing, and a discussion of how advances from vacuum tubes to digital processors have fundamentally changed the way we live. This edition includes 117 entries ranging from 3D printing to Workplace Monitoring. All entries are arranged in an A to Z order, making it easy to find the topic of interest. Each entry includes related fields of study to illustrate the connections between the various branches of computer science including computer engineering, software engineering, biotechnology, security, robotics, gaming, and programming languages; a brief, concrete summary of the topic and how the entry is organized; principal terms that are fundamental to the discussion and to understanding the concepts presented; illustrations that clarify difficult concepts via models, diagrams, and charts of such key topics as wide area networks (WAN), electronic circuits, and quantum computing; photographs of significant contributors to the field of computer science; sample problems that further demonstrate the concept presented; and further reading lists that relate to the entry. Entries in *Principles of Computer Science* range from one to five pages in length. Topics discussed include:

- 3-D printing
- Android OS
- Biometrics
- Combinatorics
- Computer animation
- Cryptography
- Debugging
- Drones
- Encryption
- Firewalls
- Fitbit
- Green computing
- Quantum computers
- LISP
- Motherboards
- Plus much, much more!

The book's back matter is another valuable resource which includes a **Timeline of the Developments** that related to and led up to the first modern computer, starting in 2400 BCE with the invention of the abacus in Babylonia and ending with the 1949 *Popular Mechanics* prediction that computers of the future might weigh no more than 1.5 tons; a **Time of Development of microprocessors** from the Intel 4004 in 1971 to the IBM POWER8 in 2014; **Nobel Notes** that explain the significance of the prizes to the study of science and their interdisciplinary nature; **List of important figures** in computer science and their key accomplishment; **Glossary**; **General bibliography**; and a **Subject index**.

The *Principle of* series offer students and researchers an easy-to-understand introduction to the major principles of Chemistry, Astronomy, Physics, Computer Science, Biology, and Physical Science. These new resources will be a helpful tool for students and researchers who are just beginning their studies of science and need a solid background of the key terms and elements in the field. A must have for all high school and undergraduate science programs.

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Principles of Computer Science

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