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Review of Principles of Computer Science, ed. by Donald R. Franceschetti.

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Principles of computer science, ed. by Donald R. Franceschetti. Salem Press/Grey House Publishing, 2016. 281p bibl index ISBN 9781682171394, $160.00.

Although this resource states its goal is to introduce students and others to the fundamentals of computer science, it is ostensibly a reference work, not a textbook, functioning as an introductory encyclopedia with 117 signed entries covering such topics as 3-D printing, algorithms, biometrics, computer security, DOS, firewalls, iOS, malware, neural networks, object-oriented design, quantum computing, signal processing, and the Turing machine. Each short entry—two to three pages—highlights the relation of the topic to computer science fields and includes a brief abstract, subject terms, and a detailed explanation with a reading list. Nearly all entries include an illustration, a diagram, or a chart to elucidate the subject, and many offer sample problems with solutions. Key terms and reading lists are included in separate glossary and bibliography sections. The appendix features time lines of developments leading to modern computers and microprocessors, pioneers of computer science with their contributions, and a detailed subject index. The entries and editor's introduction are well written and aimed at beginning students. Despite some small editing errors, this is a worthwhile acquisition for libraries supporting computer science and related programs. Purchasers of the print edition have access to the online version. Summing Up: Recommended. High school through undergraduate students; general readers. -- M. Knee, University at Albany, SUNY