NOTABLE COMPUTING BOOKS AND ARTICLES—2016

Computing Reviews is happy to bring you the 21st annual list of notable items published in computing—this time for 2016. We reached out to many in the computing community for nominations: our reviewers, CR category editors, the editors in chief of journals we cover, and computer scientists in both industry and academia. In addition, we included proceedings papers that were recognized as “Best Papers” at their respective conferences, as well as the most downloaded journal papers from some of the top journals covered in CR.

You will find 231 items on our list, with numerous publishers represented. As we continue to improve our methods for collecting nominations and involve more of your peers in the computing community, we hope to bring you even more definitive lists in the coming years.

We welcome your feedback, and encourage you to email us with any questions (editorial@computingreviews.com).

Angela Pugh
Managing Editor
Computing Reviews

A. General Literature


B. Hardware


Wang, P.; and McAllister, J. Streaming elements for FPGA signal and image processing accelerators. IEEE Transactions on Very Large Scale Integration (VLSI) Systems 24, 6 (June 2016), 2262–2274.


C. Computer Systems Organization


D. Software

Aiken, P. EXPERIENCE: succeeding at data management—BigCo attempts to leverage data. Journal of Data and Information Quality 7, 1–2 (June 2016), Article No. 8.


Burns, A. Why the expressive power of programming languages such as Ada is needed for future cyber physical systems. In Reliable software technologies: Ada-Europe 2016, Springer, 2016, 3–11.

Christakis, M.; Muller, P.; and Wustholz, V. Guiding dynamic symbolic execution toward unverified program executions. In *Proc. of the 38th International Conference on Software Engineering (ICSE)*, ACM, 2016, 144–155.


Potvin, R.; and Levenberg, J. Why Google stores billions of lines of code in a single repository. *Communications of the ACM* 59, 7 (July 2016), 78–87.


Rizzi, E. F.; Elbaum, S.; and Dwyer, M. B. On the techniques we create, the tools we build, and their misalignments: a study of KLEE. In *Proc. of the 38th International Conference on Software Engineering (ICSE)*, ACM, 2016, 132–143.


Ye, X.; Shen, H.; Ma, X.; Bunescu, R.; and Liu, C. From word embeddings to document similarities for improved information retrieval in software engineering. In *Proc. of the 38th International Conference on Software Engineering (ICSE)*, ACM, 2016, 404–415.


E. Data


F. Theory of Computation


Schmitz, S. Complexity hierarchies beyond elementary. *ACM Transactions on Computation Theory* 8, 1 (Feb. 2016), Article No. 3.

G. Mathematics of Computing


### H. Information Systems


STONEBRAKER, M. Big data is (at least) four different problems. YouTube, 01:02:35 published on June 2, 2016, stanfordonline, https://www.youtube.com/watch?v=S79buNhdiI.


I. Computing Methodologies


J. Computer Applications


K. Computing Milieux


SYMBOLS

- Book

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