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DEPARTMENT: DEPARTMENTS

ACM's Open-Conference Principle and Political Reality

ACM's Open-Conference principle reflects ACM's mission of "advance computing as a science and a profession; enable professional development; and promote policies and research that benefit society." In the past few weeks, however …

Moshe Y. Vardi

Page 5

ACM's Commitment to Accessibility

As ACM's President, I remain focused on issues of diversity. I would like to highlight two key aspects of accessibility already being addressed by ACM. The first is digital accessibility; the second is conference accessibility …

Vicki L. Hanson

Page 7

Grumpy Old Cells

I am going way out on a limb in this column into an area where I really know very little but am completely fascinated by what I am learning. The tenuous linkage to our discipline is what I will call programmed cell self-destruction …

Vinton G. Cerf

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DEPARTMENT: LETTERS TO THE EDITOR

Address the Consequences of AI in Advance

The February 2017 Viewpoints, "Smart Machines Are Not a Threat to Humanity" and "AI Dangers: Imagined and Real," both relied heavily on the lack of direct relevance of Moore's Law.

CACM Staff

Pages 10-11

DEPARTMENT: BLOG@CACM

The Slow Evolution of CS for All, The Beauty of Programs

Mark Guzdial considers the steps needed to reach the goal of CS for All, while Robin K. Hill ponders the aesthetics of programming.

Mark Guzdial, Robin K. Hill

Pages 12-13

COLUMN: NEWS

Thinking Deeply to Make Better Speech

More work is needed to make synthesized speech more natural, easier to understand, and more pleasant to hear.

Neil Savage

Pages 15-17

The Future of Semiconductors

Researchers are looking for new ways to advance semiconductors as Moore's Law approaches its limits.

Samuel Greengard

Pages 18-20

Financing the Dark Web

Cryptocurrencies are enabling illegal or immoral transactions in the dark corners of the Internet.

Keith Kirkpatrick

Pages 21-22

ACM Recognizes New Fellows

ACM has recognized 53 of its members as ACM Fellows for major contributions in areas including artificial intelligence, cryptography, computer architecture, high performance computing, and programming languages.

CACM Staff

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COLUMN: LEGALLY SPEAKING

Supreme Court on Design Patent Damages in *Samsung v. Apple*

Considering influences leading to the recent U.S Supreme Court decision in a years-long case that Apple filed against Samsung over iPhone design infringement.

Pamela Samuelson

Pages 26-28

COLUMN: COMPUTING ETHICS

Where Review Goes Wrong

Examining professional misconduct among academic publication examiners.

Elizabeth Varki

Pages 29-30

COLUMN: THE PROFESSION OF IT

Misconceptions About Computer Science

Common misconceptions about computer science hinder professional growth and harm the identity of computing.

Peter J. Denning, Matti Tedre, Pat Yongpradit

Pages 31-33

COLUMN: VIEWPOINT

Learning with Mobile Technologies

Considering the challenges, commitments, and quandaries.

Thomas M. Philip

Pages 34-36

SECTION: PRACTICE

Time, but Faster

A computing adventure about time through the looking glass.

Theo Schlossnagle

Pages 38-41

Heterogeneous Computing: Here to Stay

Hardware and software perspectives.

Mohamed Zahran

Pages 42-45

Research for Practice: Distributed Transactions and Networks as Physical Sensors

Expert-curated guides to the best of CS research.

Peter Bailis, Irene Zhang, Fadel Adib

Pages 46-49

SECTION: CONTRIBUTED ARTICLES

Making the Field of Computing More Inclusive

More accessible conferences, digital resources, and ACM SIGs will lead to greater participation by more people with disabilities.

Jonathan Lazar, Elizabeth F. Churchill, Tovi Grossman, Gerrit van der Veer, Philippe Palanque, John "Scooter" Morris, Jennifer Mankoff

Pages 50-59

The Path to the Top: Insights from Career Histories of Top CIOs

Along the way, acquire technical expertise and a master's degree, even while changing positions and companies.

Daniel J. Mazzola, Robert D. St. Louis, Mohan R. Tanniru

Pages 60-68

SECTION: REVIEW ARTICLES

Computational Support for Academic Peer Review: A Perspective from Artificial Intelligence

New tools tackle an age-old practice.

Simon Price, Peter A. Flach

Pages 70-79

SECTION: RESEARCH HIGHLIGHTS

Technical Perspective: The Power of Wi-Fi to Deliver Power

The authors of "Powering the Next Billion Devices with Wi-Fi" turn the problem of powering wireless sensor networks on its head. Instead of focusing on energy harvesting, they focus on wireless energy transfer.

Srinivasan Keshav

Page 82

Powering the Next Billion Devices with Wi-Fi

We present the first *power over Wi-Fi* system that delivers power to low-power sensors and devices and works with existing Wi-Fi chipsets.

Vamsi Talla, Bryce Kellogg, Benjamin Ransford, Saman Naderiparizi, Joshua R. Smith, Shyamnath Gollakota

Pages 83-91

Technical Perspective: Data Distribution for Fast Joins

What is the most drastic way to reduce the cost of communication for parallel data processing algorithms? This is the question studied in "Reasoning on Data Partitioning for Single-Round Multi-Join Evaluation in Massively Parallel …

Leonid Libkin

Page 92

Reasoning on Data Partitioning for Single-Round Multi-Join Evaluation in Massively Parallel Systems

We introduce a framework for reasoning about data partitioning to detect when we can avoid the data reshuffling step.

Tom J. Ameloot, Gaetano Geck, Bas Ketsman, Frank Neven, Thomas Schwentick

Pages 93-100

COLUMN: LAST BYTE

Out of Bounds

Mathematics led Subhash Khot, developer of the unique games conjecture, to computer science without his ever having seen a computer.

Leah Hoffmann

Pages 104-ff