DEPARTMENT: FROM THE PRESIDENT

How ACM Is Adapting in This Period of Global Uncertainties

The global impact of computing and information technology has never been clearer than it is now as the world continues its efforts to slow the COVID-19 pandemic.

Cherri M. Pancake

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DEPARTMENT:

DEPARTMENTS

Partnerships Can Help Drive Gender Equality

Myriad organizations work to increase the number of women in the technology sector. Are we possibly reducing our collective impact because we are sometimes competing rather than cooperating for funding and volunteer effort?

Jodi Tims

Page 7

Efficiency vs. Resilience: What COVID-19 Teaches Computing

Computer science has yet to internalize the idea that resilience, which to me includes fault tolerance, security, and more, must be pushed down to the algorithmic level.

Moshe Y. Vardi

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DEPARTMENT: ACM'S

ELECTION

ACM's 2020 General Election

Meet the candidates who introduce their plans—and stands—for the Association. Please take this opportunity to vote.

Gerald Segal

Pages 11-21

DEPARTMENT:

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Launching a New Feature in *Communications*

Communications is launching a new series of articles that broaden our presentation of the computing profession, with a particular focus on a young professional audience and a breadth of career paths.

Andrew A. Chien

Page 22

Automating Automation: CS at the Heart of the Manufacturing Economy

Using machine learning, I'm able to reduce the time required for designing products from months to mere hours as well as free up time for engineers to focus on design in terms of functions, behaviors, and structures.

Arquimedes Canedo

Page 23

DEPARTMENT: BLOG@CACM

Teaching CS Humbly, and Watching the AI Revolution

Mark Guzdial on a book that changed his thinking about teaching computer science, and Jiajie Zhang on the AI Revolution.

Mark Guzdial, Jiajie Zhang

Pages 24-25

DEPARTMENT: DEPARTMENTS

ACM Publications Finances

A detailed picture of financial information relating to ACM's publications revenues and expenses.

Jack W. Davidson, Joseph A. Konstan, Scott E. Delman

Pages 53-57

COLUMN: LAST BYTE

Optimal Chimes

The importance of the space between the notes.

Dennis Shasha

Page 112

COLUMN: NEWS

A Proof from 'The Book'

A decades-old conjecture about computational complexity is confirmed in just a few pages.

Don Monroe

Pages 27-29

Will RISC-V Revolutionize Computing?

The open instruction set for microprocessors promises to reshape computing and introduce new, more powerful capabilities.

Samuel Greengard

Pages 30-32

Deceiving the Masses on Social Media

The social media platforms like their freedom, but information gerrymandering may require legislation to fix.

Keith Kirkpatrick

Pages 33-35

COLUMN: LAW AND TECHNOLOGY

What Role for Antitrust in Regulating Platforms?

Using regulation to protect competition and innovation.

C. Scott Hemphill

Pages 36-38

COLUMN: PRIVACY AND SECURITY

Secure Development Tools and Techniques Need More Research That Will Increase Their Impact and Effectiveness in Practice

Secure development is an important and pressing problem.

Adam Shostack, Mary Ellen Zurko

Pages 39-41

COLUMN: EDUCATION

A Vision of K-12 Computer Science Education for 2030

Exploring goals, perspectives, and challenges.

Mike Tissenbaum, Anne Ottenbreit-Leftwich

Pages 42-44

COLUMN: VIEWPOINT

Computers Do Not Make Art, People Do

The continually evolving relationship between artistic technologies and artists.

Aaron Hertzmann

Pages 45-48

When Technology Goes Awry

On engineers' obligation to tame their creations.

Cal Newport

Pages 49-52

SECTION: PRACTICE

Beyond the 'Fix-It' Treadmill

The use of post-incident artifacts in high-performing organizations.

J. Paul Reed

Pages 58-63

Revealing the Critical Role of Human Performance in Software

It's time to appreciate the human side of Internet-facing software systems.

David D. Woods, John Allspaw

Pages 64-67

SECTION: CONTRIBUTED

ARTICLES

Reading in the Panopticon: Your Kindle May Be Spying on You, But You Can't Be Sure

eBooks *may* have surveillance technologies embedded in them. Should we care?

Stephen B. Wicker, Dipayan Ghosh

Pages 68-73

A Bibliometric Approach for Detecting the Gender Gap in Computer Science

Identifying female CS scientists by combining a robust bibliographic database and name filtering tools.

Sandra Mattauch, Katja Lohmann, Frank Hannig, Daniel Lohmann, JÜrgen Teich

Pages 74-80

SECTION: REVIEW ARTICLES

A Snapshot of the Frontiers of Fairness in Machine Learning

A group of industry, academic, and government experts convene in Philadelphia to explore the roots of algorithmic bias.

Alexandra Chouldechova, Aaron Roth

Pages 82-89

Indistinguishability

Diverse examples depict how indistinguishability plays a central role in computer science.

Hagit Attiya, Sergio Rajsbaum

Pages 90-99

SECTION: RESEARCH

HIGHLIGHTS

Technical Perspective: Fake 'Likes' and Targeting Collusion Networks

"Measuring and Mitigating OAuth Access Token Abuse by Collusion Networks," by Shehroze Farooqi *et al.*, explores a social-networking reputation manipulation ecosystem.

Geoffrey M. Voelker

Page 102

Measuring and Mitigating OAuth Access Token Abuse by Collusion Networks

We carried out a comprehensive measurement study to understand how collusion networks exploited popular third-party Facebook applications with weak security settings to retrieve OAuth access tokens.

Shehroze Farooqi, Fareed Zaffar, Nektarios Leontiadis, Zubair Shafiq

Pages 103-111