

DEPARTMENT: DEPARTMENTS

Where Have All the Domestic Graduate Students Gone?

U.S. Government actions to restrict immigration could result in a dramatic reduction in the number of international graduate students in U.S. universities, and will have a devastating impact on U.S. graduate programs in computing ...

Moshe Y. Vardi

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DEPARTMENT: LETTERS TO

THE EDITOR

Lost in Translation

Aaron Hertzman's Viewpoint "Computers Do Not Make Art, People Do," makes excellent points as to why it is very unlikely that computers will ever replace artists.

CACM Staff

Pages 9-10

DEPARTMENT: BLOG@CACM

Teaching CS Undergrads Online to Work With Others Effectively

Orit Hazzan on the challenges of taking a CS soft skills class online after teaching it in a classroom for a decade.

Orit Hazzan

Pages 12-13

COLUMN: NEWS

It's Alive!

Scientists and engineers cross the reality gap, transferring simulated evolution into real machines.

Gregory Mone

Pages 15-17

AI on Edge

Shifting artificial intelligence to the "edge" of the network could transform computing . . . and everyday life.

Samuel Greengard

Pages 18-20

Virtual Collaboration
in the Age of the

Coronavirus

Videoconferencing apps took off during the COVID-19 lockdowns, but more efficient ways to collaborate virtually are waiting in the wings.

Paul Marks

Pages 21-23

COLUMN: LAW AND

TECHNOLOGY

A Recent Renaissance in Privacy Law

Considering the recent increased attention to privacy law issues amid the typically slow pace of legal change.

Margot Kaminski

Pages 24-27

COLUMN: SECURITY

Autonomous Vehicle Safety: Lessons from Aviation

How more than 25 years of experience with aviation safety-critical systems can be applied to autonomous vehicle systems.

OF IT

Avalanches Make Us All Innovators

Avalanches generate enormous breakdowns. The practices of innovation adoption may be just what you need to resolve them.

Peter J. Denning

Pages 32-34

Integrating Management Science Into the HPC Research Ecosystem

How management science benefits from High Performance Computing.

Guido Schryen

Pages 35-37

'Have You Thought About . . . ': Talking

About Ethical Implications of Research

Considering the good and the bad effects of technology.

Amy Bruckman

Pages 38-40

Dark Patterns: Past, Present, and Future

The evolution of tricky user interfaces.

Arvind Narayanan, Arunesh Mathur, Marshini Chetty, Mihir Kshirsagar

Pages 42-47

Is Persistent Memory Persistent?

A simple and inexpensive test of failure-atomic update mechanisms.

Terence Kelly

Pages 48-54

ARTICLES

Becoming an 'Adaptive' Expert

Investigating student knowledge transfer and metacognitive activities at college CS departments and at coding bootcamps.

Quinn Burke, Cinamon Sunrise Bailey

Pages 56-64

Improving Social Alignment During

Digital Transformation

Exploring what leaders can do to improve and sustain social alignment over time.

Andrew Burton-Jones, Alicia Gilchrist, Peter Green, Michael Draheim

Pages 65-71

Keeping CALM: When Distributed Consistency Is Easy

In distributed systems theory, CALM presents a result that delineates the frontier of the possible.

Joseph M. Hellerstein, Peter Alvaro

Pages 72-81

SECTION: RESEARCH

HIGHLIGHTS

Technical Perspective: Computing the Value of Location Data

"Computing Value of Spatiotemporal Information," by Heba Aly *et al.*, describes a technique for computing the monetary value of a person's location data for a potential geo-marketplace.

Cyrus Shahabi

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Computing Value of Spatiotemporal

Information

We investigate the intrinsic value of location data in the context of strong privacy, where location information is only available from end users via purchase.

Heba Aly, John Krumm, Gireeja Ranade, Eric Horvitz

Pages 85-92

Technical Perspective:

Progress in Spatial Computing for Flood Prediction

There are few algorithms for multi-flow graphs beyond flow accumulation. The authors of "Flood-Risk Analysis on Terrains" take a big step to fill this knowledge gap.

Shashi Shekhar

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Flood-Risk Analysis on Terrains

In this paper, we study a number of flood-risk related problems, give an overview of efficient algorithms for them, as well as explore the efficacy and efficiency of these algorithms on real terrains.

Aaron Lowe, Pankaj K. Agarwal, Mathias Rav

Pages 94-102

COLUMN: LAST BYTE

Little Green Message

A different kind of first-contact scenario.

Brian Clegg

Pages 104-ff