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By Alexandra Fedorova, Sergey Blagodurov, and Sergey Zhuravlev

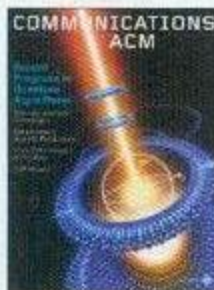


Article development led by queue.acm.org

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A translator framework enables the use of model checking in complex avionics systems and other industrial settings.
By Steven P. Miller, Michael W. Whalen, and Darren D. Cofer

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What quantum algorithms outperform classical computation and how do they do it?
By Dave Bacon and Wim van Dam



About the Cover: Hopes abound for a future with quantum computers and the algorithms that steer them. On page 84, Dave Bacon and Wim van Dam trace the latest discoveries in quantum algorithms that outperform their classical counterparts. Keem Broen and Chris Wren, of Vancouver-based Monolithix Studios,

created a vision of quantum rings, dots, and algorithms encircling a Bloch sphere.

Contributed Articles

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How Coverity built a bug-finding tool, and a business, around the unlimited supply of bugs in software systems.
By Al Bessey, Ken Block, Ben Chelf, Andy Chou, Bryan Fulton, Seth Hallem, Charles Henri-Gros, Asya Kamsky, Scott McPeak, and Dawson Engler
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Virtual Extension

As with all magazines, page limitations often prevent the publication of articles that might otherwise be included in the print edition. To ensure timely publication, ACM created *Communications'* Virtual Extension (VE).

VE articles undergo the same rigorous review process as those in the print edition and are accepted for publication on their merit. These articles are now available to ACM members in the Digital Library.

Reversing the Landslide in Computer-Related Degree Programs

Irma Becerra-Fernandez, Joyce Elam, and Susan Clemmons

Practical Intelligence in IT: Assessing Soft Skills of IT Professionals

Damien Joseph, Soon Ang, Roger H.L. Change, and Sandra A. Slaughter

Wireless Insecurity: Examining User Security Behavior on Public Networks

Tim Chenoweth, Robert Minch, and Sharon Tabor

Informatics Creativity: A Role for Abductive Reasoning?

John Minor Ross

Designs for Effective Implementation of Trust Assurances in Internet Stores

Dongmin Kim and Izak Benbasat

Taking a Flexible Approach to ASPs

Farheen Altaf and David Schuff

Managing a Corporate Open Source Software Asset

Vijay K. Gurbani, Anita Garvert, and James D. Herbsleb

Takes Two to Tango: How Relational Investments Improve IT Outsourcing Partnerships

Nikhil Mehta and Anju Mehta