Contents

October-December 2020
Volume 19 Number 4

8 **Guest Editors' Introduction**
Pervasive Computing at the Edge
Paramvir (Victor) Bahl, Ramón Cáceres, Nigel Davies, and Roy Want

19 **Edge Computing for Legacy Applications**
Mahadev Satyanarayanan, Thomas Eiszler, Jan Harkes, Haithem Turki, and Ziqiang Feng

www.computer.org/pervasive

Theme Articles

10 **OpenRTiST: End-to-End Benchmarking for Edge Computing**
Shilpa George, Thomas Eiszler, Roger Iyengar, Haithem Turki, Ziqiang Feng, Junjue Wang, Mahadev Satyanarayanan, and Padmanabhan Pillai



ISSN: 1536-1268

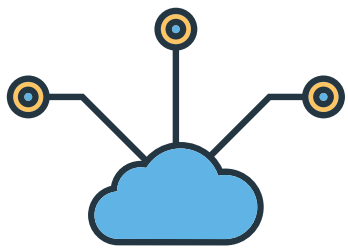


Image credit: istock/rashadashurov

COLUMNS AND DEPARTMENTS

From the Editor-in-Chief

4 **The New Normal**

Marc Langheinrich

Conferences

29 **Attending Doctoral Events—Experiences and Lessons**

Viktor Matkovic, Jaelle Scheuerman, Madeleine Steeds, and Sarah Turner

Education & Training

35 **Making, Together, Alone: Experiences from Teaching a Hardware-Oriented Course Remotely**

Susanne Boll, Tjado Ihmels, Tobias Lunte, and Heiko Müller

Pervasive Healthcare

42 **Empowering Communities With a Smartphone-Based Response Network for Opioid Overdoses**

Gabriela Marcu, David G. Schwartz, Janna Ataiants, Alexis Roth, Inbal Yahav, Benjamin Cocchiaro, Michael Khalemsky, and Stephen Lankenau

Smart Home

48 **When Mental Models Grow (C)old: A Cognitive Perspective on Home Heating Automation**

Christina Bremer

Wearable Computing

53 **Wearables to Fight COVID-19: From Symptom Tracking to Contact Tracing**

Oliver Amft, Luis Ignacio Lopera González, Paul Lukowicz, Sizhen Bian, and Paul Burggraf

SUSTAINABLE FORESTRY INITIATIVE
Certified Chain of Custody
At Least 25% Certified Forest Content
www.sfiprogram.org
SFI-01042

IEEE pervasive COMPUTING