From the Editor's Desk

Consumer Technology Can Play a Role to Reduce the Spread of COVID-19

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I WELCOME THE readers to the second issue of year 2021, the March 2021 issue, of the IEEE CONSUMER ELECTRONICS MAGAZINE (MCE).

CONSUMER TECHNOLOGIES FOR COVID-19 PREVENTION

This issue of IEEE MCE is dedicated to Consumer Technology solutions for the diagnosis and control of Coronavirus Disease 2019 (COVID-19).

Entire world has been dealing with the spread of COVID-19 disease caused by the novel coronavirus SARS-CoV-2 since last few months. The health science has been working on the development of medications and preventions through vaccines. At the same time, question arises can Consumer Technology help in some way while there have been discussions of mechanisms like social distancing and contact tracing to reduce the spread of infection. Our IEEE Consumer Electronics Magazine has brought several articles in the past on this matter. At the same time, I was contacted by members of the Editorial Board to bring a Special Section or Special Issue on COVID-19. I agreed to join their effort to bring this thematic issue. This issue includes several articles that covers Consumer Technology based solutions, which can be used for the diagnosis as well as reduction of COVID-19 infections spread.

Consumer Technology based solutions such as smart wearables can help in social distancing and infection control by possibly filtering air that is inhaled. The smart wearable can be sensors in various form factors including biosensors, wrist band, head band, and face masks. Smart wrist bands can be useful to diagnose COVID-19 while analyzing various symptoms. Smart face masks with built-in Consumer Electronics can actively help to reduce to airborne pathogens as compared to the passive face masks. Smart wearable can sound alarm when social distancing is violated. Consumer Technology based solutions can help hospitals to better manage a large number of COVID-19 patients.

FEATURE ARTICLES

Glare-free High Beam Control for Oncoming Vehicle Safety in Nighttime: This article presents a consumer technology framework to improve driving safety during nights by reducing glare of the headlights.

VESPA: Optimizing Heterogeneous Sensor Placement and Orientation for Autonomous Vehicles: This article introduces an approach to determine the location and orientations of the sensors in the autonomous vehicles.

Efficient Open Source Software Radio on Heterogeneous Multicore Embedded Platforms: This

Digital Object Identifier 10.1109/MCE.2020.3046854
Date of current version 2 February 2021.

article presents a methodology for realizing software radio applications in multicore embedded platforms.

Real-Time Noise Classifier on Smartphone: This article presents lightweight deep neural network (DNN) models that can run in smart mobile phones.

COLUMNS

Bits Versus Electrons—Consumer Technology versus 5G: This article discusses consumer technology perspectives of 5th generation (5G) wireless technology.

The Art of Storage—MRAM Coming to Consumer Products: This article presents views on use of magnetic random-access memory (MRAM) in consumer products.

Energy and Security Matters—When Do We Need the Blockchain?: This article presents thoughts on the deployment of blockchain technology in data driven systems.

Standards—Data-trading standard's potential to uncover the value of data reserve: This article presents the progress of IEEE P3800 working group working on standardization of the trading of data.

Industry Trends—History of Video Game Distribution: This article broadly discusses history of distribution of video games.

SPECIAL SECTION

This Special Section on *Consumer Technology-Based Solutions for COVID-19* presents a selected set of articles to cover the scope. I would like to thank the guest editors, Himanshu Thapliyal, M. B. Srinivas, Katina Michael, and Madhavi K. Ganapathiraju, for all their hard work for this strong special section which will be an excellent reading for the readers of the IEEE Consumer Electronics Magazine as well as the researchers around the globe.

LOOKING FORWARD

I hope that the current issue dedicated to the Consumer Technology Solutions for COVID-19 becomes a good reading for a wider set of Consumer Technology researchers to advance their knowledge. The IEEE Consumer Electronics Magazine will continue the trend of covering more themes for its enthusiastic and dedicates readers in future issues on the latest hot topics with the active support of the editorial board members, reviewers, and authors, around the globe.

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