

A Look at New Publications

By Stuart Lipoff

In the previous edition of *IEEE Consumer Electronics Magazine* I hoped to raise awareness of a Consumer Electronics (CE) Society membership benefit, in particular that your CE Society membership entitles you to electronic access via *IEEE Xplore* to the content of not just this magazine and our transactions but also many other CE Society-sponsored publications. The purpose of this article is to remind you about these additional publications as well as to highlight details of two new publications.

Access to some CE Society publications is included in your basic dues, while the affiliated publications are available for an additional subscription fee at a price that is discounted for CE Society members at a lower rate than available to non-CE Society IEEE members. Additional information about subscription prices and the scope of coverage of these publications is posted online at <http://pubs.ieee-cesoc.org>.

OUR FLAGSHIP PUBLICATIONS

The CE Society has two flagship publications for which unlimited electronic access is provided to Society members via *IEEE Xplore*: *IEEE Transactions on Consumer Electronics* and *IEEE Consumer Electronics Magazine*. In addition, we have arranged for unlimited electronic access to *IEEE RFID Virtual Journal*. A hard copy of *IEEE Consumer Electronics*

Magazine is also mailed quarterly to all members. Hard copies of *IEEE Transactions on Consumer Electronics* are available under the terms of an extra cost subscription fee.

OUR CURRENT AWARENESS EZINE

At the end of each month, we e-mail our eZine, *CESoc World*, to all our members. This short e-mail features a



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table of contents of our flagship publications, our conference schedule, and general information about Society activities. The main purpose of *CESoc World* is to make you aware of the content contained in our flagship publications and allow you to retrieve it from *IEEE Xplore*.

AFFILIATED PUBLICATIONS AVAILABLE WITH CE SOCIETY MEMBER DISCOUNT

In addition to our 100% ownership flagship publications and eZine, we have joint agreements with other Societies to offer affiliated publications to our CE Society members. We provide financial support to these journals and a varied degree of editorial and management

responsibilities in steering editorial policy. The common aspect of each of these affiliated publications is that they represent developing foundation technologies that are of increasing interest to our members who design consumer electronics products, services, and technology. If you are looking for a deep dive into the subject matter of these publications, we invite you to explore a subscription at the CE Society member discount rate.

- ▼ *IEEE Transactions on Affective Computing*
- ▼ *IEEE Transactions on Autonomous Mental Development*
- ▼ *IEEE Biometrics Compendium*
- ▼ *IEEE Transactions on Cloud Computing*
- ▼ *IEEE Cloud Computing Magazine*
- ▼ *IEEE Transactions on Computational Intelligence and AI in Games*
- ▼ *IEEE/OSA Journal on Display Technology*
- ▼ *IEEE Transactions on Haptics*.

FEATURED AFFILIATED PUBLICATIONS

In the previous issue, I provided details on *IEEE Transactions on Autonomous Mental Development* and *IEEE Transactions on Cloud Computing*. In this edition, I will detail information on two new affiliated publications, with an emphasis on why these publications should be of interest to stakeholders in the CE industry. Details on subscribing to these and all our publications are available at <http://pubs.ieee-cesoc.org>.

IEEE TRANSACTIONS ON HAPTICS

At the heart of consumer electronics OEMs and service providers is offering end users an entertaining and immersive experience. Due to costs and the limitations of technology, for most of CE history we have been limited to just visual and auditory sensory stimulation. By employing haptics, we have the ability to add touch to the senses that we can stimulate.

The use of simple tactile feedback has been employed and valued for some time in improving the user experience in using keyboards and keypads, but today's state-of-the-art haptics can add excitement to playing games and a new dimension to action movies employing butt kickers and vibration generators. Beyond enriching entertainment experiences, haptics has multiple nonentertainment applications potential. Aircraft designs have employed so-called *stick shakers* to alert eyes-busy pilots to impending dangerous stalls. Extending this to the CE world, we can add haptics warnings to, for example, the steering wheels of our cars and alarm clocks.

Haptics as an output technology can enable CE and information technology devices for the blind and other ability-challenged consumers. In the medical field, haptics is already being employed to provide doctors with tactile feedback in performing robotic surgery. Relating this technology to CE products and services, we can imagine applications where fine robotic-like control is needed, such as in using a joystick to navigate a device or flying a consumer drone. Already on the market are next-generation game consoles that simulate engagement in sporting activities such as golf, baseball, and tennis. By adding haptics, we can further enhance the value of these simulations as training aids.

IEEE Transactions on Haptics addresses science, technology, and applications associated with information acquisition and object manipulation through touch. Haptics is an interdisciplinary science that concerns CE as well as robotics, teleoperation, and telemedicine. Haptic interactions relevant to this journal include all aspects of manual exploration and manipulation by humans, machines, and interactions between the

two, performed in real, virtual, teleoperated, or networked environments.

IEEE Transactions on Haptics is published quarterly, with one issue on a special topic area. The journal is financially cosponsored by the IEEE CE Society, IEEE Robotics and Automation Society, and IEEE Computer Society and is also technically cosponsored by the IEEE Engineering in Medicine and Biology Society. More information is available at <http://cesoc.ieee.org/transhaptics.html>.

IEEE BIOMETRICS COMPENDIUM

Throughout the history of man-machine interface, we have required that the end



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user adapt to the limitations of machines by dealing with the inability of the machine to understand natural man-to-man communications. Historically, we have learned to type on keyboards, push buttons, activate levers, read displays, and employ other means to interact with our machines. The potential offered by biometrics is to enable man-machine interactions that approach man-to-man interactions. Beyond the user-interface aspect of man-to-man interactions, biometrics also offers the potential of enabling man-to-man identification and recognition. With the increasing need to secure and verify cyberspace transactions and activities, biometrics offers a solution for validation of the end user's identity by means such as speaker recognition, face recognition, fingerprints, hand geometry, retinal eye patterns, and other innate unique human characteristics.

Biometric technology is at an early stage of deployment in CE products and

services, but by making CE easier to use, more enjoyable, and more secure, biometrics offers clever CE stakeholders an opportunity to differentiate and make their market offerings more attractive and successful.

IEEE Biometrics Compendium, a quarterly IEEE virtual journal, is a collection of previously published IEEE papers in specific scientific and technical disciplines, paired with value-added commentary from technology experts. It was created by the IEEE Biometrics Council and is the first virtual journal published by the IEEE.

IEEE Biometrics Compendium addresses the theory, design, and application of biometric characterization of human beings, based on physiological and/or behavioral features and traits, in particular for identification, identity verification, authentication, cancelable/revocable biometrics, recognition and privacy considerations, and social impact and medical diagnosis. The broad spectrum of applications of biometrics is reflected by the equally broad spectrum of the fields of interest of sponsoring IEEE Societies:

- ▼ aerospace and electronic systems
- ▼ circuits and systems
- ▼ communications
- ▼ computational intelligence
- ▼ computer
- ▼ consumer electronics
- ▼ engineering in medicine and biology
- ▼ instrumentation and measurement
- ▼ intelligent transportation systems
- ▼ photonics
- ▼ robotics and automation
- ▼ signal processing
- ▼ solid-state circuits
- ▼ systems, man, and cybernetics
- ▼ ultrasonics, ferroelectrics, and frequency control
- ▼ vehicular technology.

Subscribers to *IEEE Biometrics Compendium* receive full-text PDF access to all articles referenced from the current year and past years. For additional details on the compendium, please visit http://www.ieee.org/publications_standards/publications/subscriptions/prod/biometricscompendium.html.

