

EIC MESSAGE

IT IS indeed a great honor to present you with the first Issue of the IEEE TRANSACTIONS ON EMERGING TOPICS IN COMPUTING (TETC). TETC is the newest and only Open Access (OA) Transactions of the IEEE Computer Society (CS), a professional organization that dynamically remains at the forefront of the computing field by embracing multi-facet technologies across science and engineering.

TETC has far reaching scopes and objectives across the whole spectrum of publication activities of the IEEE CS; in fact, it complements the current peer-reviewed publications and positions its portfolio to tremendously *benefit* from the publication of a *different type* of Transactions. Over more than half a century, the IEEE CS has met the highest publication standards and technical aspirations on a worldwide basis by serving practitioners, students, researchers, teachers and scientists/engineers alike; however, it has traditionally positioned its titles across *individual* Transactions spanning specific areas. The success in launching new titles, the continued rate of technology innovation and the timely disclosure of key results are convincing examples that the IEEE CS has also become a *truly interdisciplinary* organization. Moreover, it has the potential to be the best information provider to a *prime global arena* to develop and foster the dissemination of articles and advanced coverage across many and interwoven technical domains. So while existing Transactions of the CS publish articles in a specific field, TETC focuses its publication activities to Special Issues/Sections (SISs) covering *interdisciplinary* and *emerging areas* in computing; this *diverse* coverage allows the publication of survey articles as well as manuscripts (if pertinent and approved by the Guest Editors) in technical themes that are promising, but still in an initial state of evolution. TETC therefore provides a new *forum* of the highest quality by which new technological advances are delivered to the readership as well as aiding our community to identify venues to sustain the continued growth of the IEEE CS and its activities with the discovery of new technical directions of interest.

The publication of the first issue of TETC comes after nearly two years in which all constituencies of the IEEE CS have profusely contributed to its planning and launching. Since my appointment as Editor-In-Chief, my highest priority has been to ensure an immediate coverage of the widest variety of technical themes. As appearing on the TETC web site, the publication pipeline has now a comprehensive set of SISs; they cover new areas with resounding researchers as Guest Editors. Therefore, the publication schedule of TETC is *very exciting*; while IEEE TETC is a quarterly publication, only two issues will be available for 2013, the normal schedule (i.e. four issues per year) will be effective starting 2014.

As EIC, I have witnessed a tremendous response from many technical communities; an SIS can be organized around an emerging area (topics of interdisciplinary nature are of particular interest), professional meetings (such as workshops and symposia) and professional activities of Technical Committees (TCs) as well as Special Technical Communities (STCs) found in the volunteer organization of the CS. TETC continues to receive a substantial number of submissions, thus likely to exceed the most optimistic projections; it is its almost seamless coverage that makes TETC very attractive to potential authors. In all cases, the review process of the submissions *must take place* using the Manuscript Central tool at the web site of IEEE TETC, i.e. <https://mc.manuscriptcentral.com/tetc-cs>. Please do not hesitate to contact me if you need further and more detailed information for proposing a SIS in TETC. I always welcome and encourage new proposals.

TETC offers *many advantages* to an author; the most obvious is that as each SIS has a precise date of publication, then decisions on submissions must closely meet the published schedule and delays in review are very unlikely to occur (similar to the publication of an article in a conference proceedings). The Guest Editors are selected among the leaders in the SIS field, while the reviewers have shown a remarkable dedication in ensuring the timely completion and success of a SIS. This process also requires that when submitting an article, the contacting author must identify the SIS to which your paper should be directed. Also, do not wait till the deadline; as soon as an SIS is announced on the web site, TETC Manuscript Central will be open to accept your contribution and the Guest Editors can start the peer-review process, thus shortening the cycle for making a decision on a paper.

I would like to remind our contributors that TETC is only OA, thus enabling a wider and unrestricted distribution of your work. OA provides unrestricted access to peer-reviewed journal articles via the Internet. In lieu of paid subscriptions, authors are required to pay a publication fee after their paper has been accepted. TETC has an OA fee that is substantially less than any other IEEE sponsored publication, making OA very affordable. While offering OA, TETC remains fully committed to ensure that only manuscripts of the highest quality and impact will be published. Together with a very extensive support for ensuring originality in each manuscript (through similarity and plagiarism checking software), TETC has already in place a very tight, yet professional review process, currently with an acceptance rate of less than 25%. IEEE TETC offers therefore a unique opportunity for authors to showcase their work on a high quality Transactions and to the widely popular IEEE web site.

I have learned firsthand that there are many challenges with a new Transactions, the seamless coverage of TETC is also reflected in its own organization. I have appointed the following three distinguished colleagues as Associate Editors-in-Chief (AEICs). They will be responsible for promoting and coordinating activities in their areas of expertise with respect to the Guest Editors of the SISs.

- Professor C. Bolchini (Politecnico di Milano, Italy), hardware systems.
- Professor D. Spinellis (Athens University of Economics and Business, Greece), information technology.
- Professor A. Pears (Uppsala University, Sweden), education.

Appointments in other areas relevant to TETC will soon be announced as suitable candidates are found in the near future. Moreover to better coordinate activities of IEEE TETC with existing CS-sponsored Transactions, a Steering Committee is also in place (an appointment is at the discretion of the EIC of the represented Transactions).

In conclusion, I am very excited about the opportunities that lie ahead for IEEE TETC. All indicators are up and I warmly extend an invitation to you to participate either as an author, or a proposer of a SIS. Do not hesitate to contact me as you will find me very receptive to innovative themes and helpful in ensuring that your proposal will be evaluated fairly and speedily.

Papers published in IEEE TETC will require a template that is consistent with the IEEE Open Access document format. The MS Word template of IEEE TETC can be found at its website; we encourage to submit manuscripts using this template, so that an author will have a better appreciation of the charges to be incurred for OA publication if the paper is accepted.

FABRIZIO LOMBARDI, *Editor-in-Chief*
Northeastern University
Boston, MA, USA
lombardi@ece.neu.edu



FABRIZIO LOMBARDI (M'02–SM'08–F'09) received the B.Sc. (Hons.) degree in electronic engineering from the University of Essex, Essex, U.K., in 1977. In 1977, he joined the Microwave Research Unit, University College London, London, U.K., where he received the master's degree in microwaves and modern optics in 1978, the Diploma in microwave engineering in 1978, and the Ph.D. degree from the University of London, London, U.K., in 1982.

He is currently the holder of the International Test Conference Endowed Chair Professorship at Northeastern University, Boston, MA, USA. From 1998 to 2004, he served as a Chair of the Department of Electrical and Computer Engineering. Prior to Northeastern University, he was a Faculty Member with Texas Tech University, Lubbock, TX, USA, University of Colorado-Boulder, Boulder, CO, USA, and Texas A&M University, College Station, TX, USA.

Dr. Lombardi is currently an Associate Editor of the IEEE TRANSACTIONS ON NANOTECHNOLOGY and the Inaugural Editor-in-Chief of the IEEE TRANSACTIONS ON EMERGING TOPICS IN COMPUTING. He is an elected Member of the Board of Governors of the IEEE Computer Society, he is a member of the Administrative/Executive Boards of the IEEE Nanotechnology Council and the Computing-in-the-Core non-partisan advocacy coalition for K-12 Computer Science education. He was a two 2-year term Editor-in-Chief from 2007 to 2010, an Associate Editor-in-Chief from 2000 to 2006 and Associate Editor from 1996 to 2000 of the IEEE TRANSACTIONS ON COMPUTERS. He has been a member of the Editorial Boards of the *ACM Journal of Emerging Technologies in Computing Systems*, the *IEEE Design & Test Magazine*, and the IEEE TRANSACTIONS ON CAD of ICAS. He has been twice a Distinguished Visitor of the IEEE Computer Society from 1990 to 1993 and 2001 to 2004. He serves as a Chair of the Committee on "Nanotechnology Devices and Systems" of the Test Technology Technical Council of the IEEE. He is a fellow of the IEEE for "contributions to testing and fault tolerance of digital systems." He was a recipient of the 2011 Meritorious Service Award and elevated to Golden Core membership by the IEEE Computer Society. He has received many professional awards: the Visiting Fellowship at the British Columbia Advanced System Institute, University of Victoria, Canada, in 1988, twice the Texas Experimental Engineering Station Research Fellowship from 1991 to 1992, 1997 to 1998 the Halliburton Professorship in 1995, the Outstanding Engineering Research Award at Northeastern University in 2004, and the International Research Award from the Ministry of Science and Education of Japan from 1993 to 1999. He was a recipient of the 1985 and 1986 Research Initiation Award from the IEEE/Engineering Foundation and a Silver Quill Award from Motorola-Austin in 1996.

At the IEEE DFT07 Symposium, one of his papers was selected for the best paper award. He has been involved in organizing many international symposia, conferences and workshops sponsored by professional organizations as well as guest editor of Special Issues in archival journals and magazines, such as IEEE TRANSACTIONS ON COMPUTERS, the IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, *IEEE Micro Magazine*, and the *IEEE Design & Test Magazine*. He is the Founding General Chair of the IEEE Symposium on Network Computing and Applications and the IEEE International Workshop on Design and Test of Nano Devices, Circuits and Systems. His current research interests include VLSI design, emerging technologies, memory circuits/architectures, bio/nano-inspired computing and fault/defect tolerance of digital systems. He has extensively published in these areas and co-authored/edited ten books.