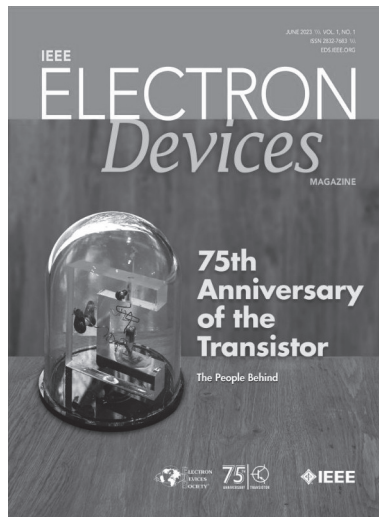


## THE NEW IEEE ELECTRON DEVICES MAGAZINE

I am happy to inform you that the first (June'23) issue of the **IEEE Electron Devices Magazine (ED-M)** is just to be published. ED-M is the new initiative of the IEEE Electron Devices Society. It will be issued by IEEE with the full financial support of our Society.

The Magazine focuses on the publication of peer-reviewed tutorial and survey papers related to the wider field of electron devices and their applications. It may also include articles dealing with environmental, societal, and humanitarian issues. Besides, columns by renowned experts will be included, dealing with educational, research, industrial and open topics and sharing personal opinions in a compact format. Also, news related to the Electron Devices Society will be displayed in the Magazine, including the President's Column and conference reports.

The IEEE Electron Devices Magazine will be published quarterly, with issues appearing in March, June, September and December. Most issues of the Magazine will include a "focus section," that will feature topical articles invited by guest editors. Each issue will be displayed in light of the given focus topic. The nearest ones' leading themes will be:



- June 2023: 75th Anniversary of the Transistor
- September 2023: Neuromorphic Computing
- December 2023: Semiconductor Manufacturing
- March 2024: Large-Area and Flexible Electronics

In addition to the invited topical articles, contributed technical articles on all topics related to the field of electron devices will be presented. Their Authors are advised to try to match their submissions to the Editorial Calendar, though this is not a strict requirement.

I do hope that you, the readers of the Magazine, will find its contents interesting and may vividly react to them in the

letters to the Editor (ED-M-editor@ieee.org). I also strongly encourage you to contribute to the Magazine with your articles and personal opinions.

More information about ED-M, including information about paper submission, indexing, subscription, access, can be found at: <https://eds.ieee.org/publications/ieee-electron-devices-magazine>

Prof. Dr. Joachim N. Burghartz  
Founding Editor-in-Chief  
ED-M-editor@ieee.org

## A BRIEF HISTORY OF THE IEEE ELECTRON DEVICES SOCIETY: PART II—PUBLICATIONS

SAMAR K SAHA

PROSPICIENT DEVICES, MILPITAS, CA 95035, USA

In the article, "A Brief History of the IEEE Electron Devices Society: Part I," appeared in the *IEEE Electron Devices Society Newsletter*, volume 30, no. 2, April 2023, the *origins and growth of the Electron Devices Society (EDS) of the Institute of Electrical and Electronics Engineers (IEEE)* were presented [1]. As described in [1] and shown in Fig. 1, on March 5, 1952 the *Institute of Radio Engineers (IRE) Professional Group on Electron Devices (PGED)* was established to interact directly with the *electron devices community* which on January 1,

1963 became the *IEEE Professional Technical Group on Electron Devices (PTGED)*; on May 20, 1964 was renamed the *IEEE Electron Devices Group (EDG)*; and on February 17, 1976 became the IEEE EDS. The Society's worldwide growth has been culminated by a diversified portfolio of journal publications within its *Field-of-Interest (FoI)*. This article presents a brief history of Society's relentless pursuit in launching major journal publications within the technical areas of importance to its global community.

One of the major efforts of the IRE PGED during its formative years had been publication of a journal and a monthly newsletter. In pursuant of this effort, the Group launched its first publication, the *Transactions*, in 1952 and many more in the ensuing decades as described below.

## 1. Transactions

### A. Transactions of the IRE Professional Group on Electron Devices

Through relentless efforts of AdCom Subcommittee on Publications successive Chairmen *Herbert J. Reich* of Yale University, Connecticut and *John Saby* of General Electric (GE), New York, a quarterly journal titled, the *Transactions of the IRE Professional Group on Electron Devices* was published in November 1952 [2]. The contents of the first issue, PGED-1, November 1952, included five papers, one of which was presented at the *IRE Conference on Electron Tube Research*, Ottawa, Canada, June 16 and 17, 1952 and two were presented at the *IRE-AIEE (American Institute of Electrical Engineers) Conference on Semiconductor Research*, Urbana, Illinois, June 19 and 20, 1952 [2]. For the first few years, the Transactions was published *irregularly* depending on the availability of high quality papers, often from conferences or symposia that did not publish proceedings [2]. There was only a *single issue* in 1952, *three* in 1953, and *four* in 1954 [3], when AdCom approved to begin publishing the Trans-

actions *quarterly* on a regular basis. Also from the year 1954, the Transactions volume started as ED-1 [3].

After establishing the regularity of publication schedule, a formal editor was appointed in charge of the Transactions and it was renamed the *IRE Transactions on Electron Devices*.

### B. IRE Transactions on Electron Devices

In 1955, *Earl L. Steele* of GE, New York, was appointed as the *first* formal editor of the Transactions and the publication was renamed the *IRE Transactions on Electron Devices* [4]. Starting from the *IRE Transactions on Electron Devices*, volume ED-2, 1955, the quarterly publication continued till 1960, volume ED-7 [5]. From 1961, the Transactions became *bimonthly* [5]. After Earl L Steele's resignation publishing ED-8, issue 5, *Glen Wade* of Raytheon, Massachusetts took over as the editor bringing out Transactions, volume ED-8, issue 6, 1961, and all six issues of the last *IRE Transactions on Electron Devices*, volume ED-9, 1962 [5] before renaming the publication to the *IEEE Transactions on Electron Devices* in the year 1963 [6].

### C. IEEE Transactions on Electron Devices

The major publication of the IEEE PTGED was renamed the *IEEE Transactions on Electron Devices* (T-ED) in 1963 [6]. Glen Wade continued to serve as the editor through the 1960s, bringing on associate editors and incorporating numerous changes. Under his leadership, the T-ED

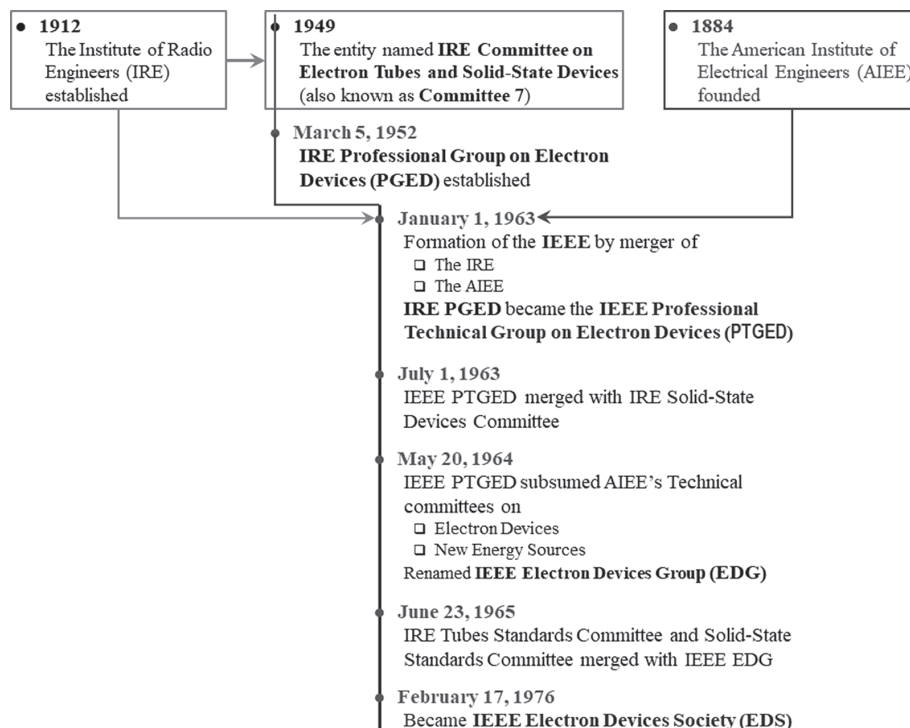


Figure 1. Origins of the IEEE EDS lie on March 5, 1952 as the IRE PGED. And, through mergers, subsuming different functionalities, and name changes in ensuing decades IRE PGED became the IEEE EDS on February 17, 1976 [1].

became a *monthly journal* in 1964, ED-11 [6]. The main reason for this expansion was the improvement in quality of the journal under Wade's editorship, which inspired many more authors to submit high quality papers for publications. Another reason being the increase in the number of submissions on emerging *quantum electronics devices* including masers and lasers [6].

Thus, the Society's first journal has been published as the *Transactions of the IRE Professional Group on Electron Devices* (1952–1954); the *IRE Transactions on Electron Devices* (1955–1962), and the *IEEE Transactions on Electron Devices* since 1963 [6].

In the 1970s, the IEEE T-ED continued to expand its editorial board with a growing number of high quality submissions. In 1971, Glen Wade stepped down as the editor and was quickly replaced by *John Copeland* of Bell Labs, who served until 1974. There was an extensive editorial board with associate editors within the EDS FoI including *bipolar devices, display devices, energy sources, electron tubes, and solid-state power devices*. Thus, a new editor could be readily appointed from these ranks whenever the existing editor decided to step down. So, Copeland was replaced by *Roland H. Haitz* of Hewlett-Packard in 1974, Haitz by *Karl H. Zaininger* of Radio Corporation of America (RCA) in 1977, Zaininger by *Stephen Knight* of Bell Labs in 1979, Knight by *David L. Carter* of Bell Labs in 1983, Carter by *Serge Luryi* of Bell Labs in 1987, Luryi by *Renuka P. Jindal* of Bell Labs in 1990, Jindal by *Doug P. Verret* of Texas Instruments in 2001, Verret by *John Cressler* of the Georgia Institute of Technology in 2012, Cressler by *Paul K. L. Yu* of the University of California, San Diego in 2015, Yu by *Giovanni Ghione* of Politecnico di Torino, Italy in 2016, and Ghione by *Patrick Fay* of the University of Notre Dame in 2023, all without any disruption in the quality and efficiency of publication [6], [7]. *Note that since February 1996, the Society's publication editor and associated editors are re-named as the Editor-in-Chief (EiC) and editors, respectively* [6].

During the 1970s, the Society's flagship publication, the IEEE T-ED established itself as a premier journal of the electron devices community. One memorable highlight of the 1970s has been the publication of the special issue on *Historical notes on important tubes and semiconductor devices, T-ED, vol. 23, no. 7, July 1976* with *Gerald Pearson* of Bell Labs serving as a guest editor together with *Roland Haitz* [8]. This (1976) T-ED special issue commemorated the 200th anniversary of the founding of the US as well as closely coincided with the 25th anniversary of the EDS. Its authors included luminaries such as William Shockley writing on "The Path to the Conception of the Junction Transistor," Jack Kilby on the "Invention of the Integrated Circuit," and Rudolf Kompfner on "The Invention of the Traveling Wave Tube" as well as Leo Esaki and George Smith [8].

In the meanwhile, semiconductor industry leaders championed the goal for very large scale integration

(VLSI), in which the microchip device features in integrated circuits (ICs) would be as small as a micron and beyond [9]. The IEEE EDS strongly supported these efforts, often working jointly with the Solid-State Circuits Council and Japanese counterparts. In 1979, a special VLSI issue was published jointly by the IEEE T-ED and *IEEE Journal of Solid-State Circuits*, edited by *Hans Friedrich* of Siemens, *Walter Kosonocky* of RCA, and *Takuo Sugano* of the University of Tokyo [10]. The IEEE EDS's effort in supporting VLSI led to the cosponsored *Symposium on VLSI Technology* in the year 1980. Subsequently, the T-ED published special issues on VLSI technology and simulation in 1980, 1982, and 1983 [6]. By the mid-1980s, VLSI was rapidly approaching the submicron regime. The Society's flagship publication, the T-ED continued to diversify its editorial board to support the semiconductor industry's relentless pursuit of scaling to manufacture IC chips in the nanometer regime approaching 1 nm. And to this date, T-ED continues to publish at least *two* special issues annually on emerging topical areas within its FoI with leading experts serving as guest editors [6], [7].

## 2. IEEE Journal of Quantum Electronics

In the 1960s, there had been growing interest in the emerging quantum devices. In order to support these emerging activities, a new Quantum Electronics Technical Committee (TC) of the IEEE PTGED was created during the 1963 reorganization [1], [11]. And in October 1964, the IEEE approved publication of a new professional journal devoted to quantum electronics. The new publication named, the *IEEE Journal of Quantum Electronics* (JQE), was cosponsored by the IEEE EDG and *Microwave Theory and Techniques* group. Launching the publication in early 1965, *Robert Kingston* of the Massachusetts Institute of Technology (MIT) and Glen Wade (of Cornell University) served as the founding co-editors along with two associate editors [12]. The JQE, volume 1, issue 1 was published in April, 1965 [12]. However, due to reorganization of the EDS's Quantum Electronics Council as a separate *IEEE Group on Quantum Electronics and Applications* in 1977, the IEEE JQE became a solely sponsored publication of this new Group from the year 1978 [1], [11].

## 3. Newsletter of the Electron Devices Group

The IRE-PGED's effort to publish a quarterly newsletter was realized in the year 1966. The first issue of the *Newsletter* of the IEEE EDG was published in June 1966 edited by *Jan M. Engel* of International Business Machines (IBM) Research in San Jose, California, USA [11]. The first issue provided a convenient forum for recent news of the organization and its day-to-day operation, beyond the scope of the Transactions. It included the highlights of AdCom meetings, reports from conferences and other professional gatherings, and information of the forthcoming meetings of interest to members. In 1970, Jan

Engel stepped down and the EDG Newsletter continued without interruption with *John Szedon* of Westinghouse as the editor. Under Szedon, the Newsletter was published *bimonthly* for a few years; however, reverted to *quarterly* in 1974. The Newsletter also had an *editorial board with associate editors* [11].

*In the year 1984, the quarterly EDS Newsletter was replaced by the new Division I publication entitled, "Circuits and Devices Magazine," due to reorganization of the IEEE Division I. However, EDS AdCom reinstated the Newsletter in 1994* [7], [11], [13].

#### 4. IEEE Journal of Solid-State Circuits

In the year 1966, the IEEE EDG co-sponsored publication of the *IEEE Journal of Solid-State Circuits* with three other professional group: *Circuit Theory, Computers, and Microwave Theory and Techniques* [14]. The joint-committee overseeing the new journal were Solid-State Circuit Council Chairman *John Linvill* of Stanford University and Vice Chairman *Gordon Moore* of Fairchild. The editorial board consisted of the founding editor *James Meindl* of the US Army Electronics Command and four associate editors [14].

#### 5. IEEE Electron Device Letters

With rapid advances in electron devices technology during the 1980s, it was extremely crucial for Society's flagship publication to keep parity with the fast-moving microelectronics industry. However, the slow rate of publication, typically 40-weeks from submission of an article to its publication in the IEEE T-ED, became a growing concern of AdCom. In order to address this issue, a quick-turnaround journal, the *IEEE Electron Device Letters* (EDL) was launched in January 1980 with *George E. Smith* of Bell Labs as the founding Editor [15]. Note that *Smith is a co-recipient of 2009 Nobel Prize in physics "for the invention of an imaging semiconductor circuit—the CCD sensor."* The inaugural issue of the new journal appeared in January 1980, containing *five* briefs. With Smith's efforts, the time to publish dropped dramatically to 10–13 weeks. It is to be noted that recently, *the average time from submission to online-publication in EDL is about 4-weeks, the fastest in the IEEE publications* [7], [15]. After Smith stepped down, *Simon M. Sze* of Bell Labs was appointed in the year 1986; Simon was replaced by *John R. Brews* of Bell Labs (later, the University of Arizona) in 1990; John was replaced by *Yuan Taur* of IBM (later, the University of California, San Diego) in 2000; Taur was replaced by *Amitava Chatterjee* of Texas Instruments in 2012; Amitava was replaced by *Tsu-Jae King Liu* of the University of California, Berkeley in 2016; Tsu-Jae was replaced by *Jesus del Alamo* of MIT in 2019; and Jesus by *Sayeef Salahuddin* of the University of California, Berkeley in 2023, thus publishing EDL uninterrupted [7]. Again, *since February 1996, the EDL editor and*

*associated editors are re-named as the EiC and editors, respectively.*

#### 6. IEEE/OSA Journal of Lightwave Technology

In the 1980s, the EDS continued to diversify into new areas creating *Opto-electronics* TC with *James Harris* of Rockwell as the first chairman in 1980 [11]. In order to support the emerging *fiber-optic communications*, EDS joined with *nine* other *IEEE societies* and the *Optical Society of America* (OSA) to start publishing a new journal, the *IEEE/OSA Journal of Lightwave Technology* (J-LT) from March 1983 with *Thomas G. Giallorenzi* of Naval Research Laboratory as editor (1983-1985) along with *six* associate editors [16]. This journal has become one of the leading authoritative publications on *optical fibers, components, networks, and systems*. Currently, the J-LT is an IEEE/OPTICA Publishing Group publication with *Gabriella Bosco* of the Politecnico di Torino, Torino, Italy as the EiC [17].

#### 7. Division I Circuits and Devices Magazine

The Division I *Circuits and Devices Magazine* was launched in 1984 divisional realignment [11], [18]. In this realignment, the *Electron Devices; Circuits and Systems; Components, Hybrids and Manufacturing Technology; and Lasers and Electro-Optics* Societies as well as the *Solid-State Circuits Council* were under Division I. The Magazine began publishing *bimonthly* from the year 1985 with *Guy Rabbat* of V R Systems, A Tektronix Company, Austin, Texas as the EiC along with five editors, one from each Division I member. The Magazine replaced the quarterly EDS Newsletter. However, *the Magazine was unsuccessful in spite of considerable time and effort by AdCom and EDS Newsletter was reinstated in 1994* [7], [11], [13]. Finally, the magazine was sunset after publishing vol. 22. No. 6., November/December 2006 [18].

#### 8. IEEE/TMS Journal of Electronic Materials

By the year 1986, the publishing efforts of the Society continued as usual. The EDS started joint publication, the *IEEE/TMS Journal of Electronic Materials* with *The Metallurgical Society* (later renamed *The Minerals, Metals and Materials Society*) [7], [11].

#### 9. Transactions on Semiconductor Manufacturing

Continuing with multi-society publication, AdCom member *David Hodges* of the University of California, Berkeley, proposed a new journal, the *Transactions on Semiconductor Manufacturing* (TSM) in the year 1987 to publish all aspects of manufacturing complex microelectronic components, primarily for VLSI applications. The TSM was cosponsored by the *EDS, Solid-State Circuits Council, Components, Hybrids and Manufacturing Technology Society, and the Reliability Society* with David as the founding editor (1987-1990). The first issue of the IEEE



TSM appeared in February 1988 [19]. After David stepped down Gary Cheek of Analog Devices, Massachusetts was appointed as the editor in 1991; Gary Cheek was replaced by Gary May of the Georgia Institute of Technology, Georgia in 1998; Gary May by Duane S. Boning of MIT in 2001; Duane by Sean Cunningham of Intel in 2012. Currently, Reha Uzsoy of North Carolina State University is the EiC of the TSM [19].

## 10. IEEE Journal of Microelectromechanical Systems

In an effort to diversify EDS publications in new technical areas within its FoI, AdCom member Richard Muller of the University of California, Berkeley proposed a joint publication with American Society of Mechanical Engineers (ASME). In the year 1990, AdCom approved the proposal of this new joint-publication on microelectromechanical systems (MEMS) with the ASME. In March 1992, the new *IEEE/ASME Journal of Microelectromechanical Systems* began publication with the *IEEE Robotics and Automation Society* (RAS) and *Industrial Electronics Society* (IES) collaborating along with this effort. Richard served as the founding editor along with a number of associated editors [20]. Since 2013 (vol. 22, no. 2), the journal is only sponsored by the IEEE and renamed as the *IEEE Journal of Microelectromechanical Systems* (JMEMS) with EDS, RAS, and IES as the co-sponsors using subscription-based sponsorship model [7], [20]. After Richard stepped down Christofer Hierold of ETH Zurich, Switzerland was appointed as the EiC in 2013; Christofer was replaced by Gianluca Piazza of Carnegie Mellon University in 2019 [7], [20].

## 11. IEEE Electron Devices Newsletter Reinstated

The quarterly EDS Newsletter which was the forum for communications between the Society's leadership and its global community was replaced by Division I Circuits and Devices Magazine in the year 1985. However, in order to improve the deteriorating financial position of the Society, AdCom unbundled the Division I Circuits and Devices Magazine from the standard membership package in the year 1990. As a result, communications between the Society's leadership and its global membership had often been difficult [7], [12]. Thus, in the December 1993 meeting, AdCom decided to *reinstate* publication of a quarterly newsletter for EDS members, starting 12 pages and increasing on-demand. Thus, from 1994 the EDS Executive Office began publishing the *IEEE Electron Devices Newsletter* again with six regional editors and Krishna Shenai of the University of Wisconsin, Madison as the Editor-in-Chief [13]. Currently, Daniel Tomaszewski of the Lukaszewicz-Institute of Microelectronics and Photonics, Poland is the EiC and Manoj Saxena of the University of Delhi is the associate EiC along with 11 regional editors [7].

## 12. Electronic Editions

During the late 1990s, the Society continued to support publishing a growing diversity of professional journals within its FoI while placing increased emphasis on *electronic editions*. In support of electronic publication, AdCom approved the first completely electronic EDS new publication, the *IEEE Journal of Technology Computer Aided Design* in 1995, and started publishing the journal in the beginning of 1997 [7]. Furthermore, the Society's two flagship publications, the EDL and TED became available on CD-ROM in 1997 for subscription [7].

## 13. IEEE/ECS Electrochemical and Solid-State Letters

In the year 1997, AdCom approved an agreement with the *Electrochemical Society* (ECS) to jointly publish a journal, the *IEEE/ECS Electrochemical and Solid-State Letters* (ESL) [11], [21]. It featured briefs with rapid turn-around time submission-to-publication in both paper and electronic editions. The volume 1 of the ESL contained six issues and the first issue appeared in July 1998. The final issue of the ESL was volume 15, number 6, April 2012 [21].

## 14. IEEE Transactions on Device and Materials Reliability

With the global race to miniaturization of metal-oxide-semiconductor (MOS) field-effect transistors (FETs) and complementary MOS (CMOS) technology [9], the materials reliability and fabrication process-induced device reliability became critical for microelectronics industry. Recognizing the importance of rapid dissemination of information critical to manufacturing high reliability products, the EDS *Device Reliability Physics* TC, under the major efforts of Lu Kasprzak, joined the *IEEE Reliability Society* to launch a new online quarterly publication, the *IEEE Transactions on Device and Materials Reliability* (TDMR) in 2001 [7], [22]. The inaugural issue of TDMR, volume 1, no. 1 appeared in March 2001 with Anthony S. Oates of Agere Systems, Florida as the EiC (2001-2018) [22]. In 2019, Edmundo A. Gutiérrez of the Instituto Nacional de Astrofísica Óptica y Electrónica, Mexico was appointed as the EiC [7], [22].

## 15. EDS Archival Collection on DVD

In the year 2004, the Society released the *Archival Collection* of the major publications on a set of DVD (Digital Video Discs) through the effort of AdCom Vice President (VP) of Publications Renuka Jindal of the University of Louisiana at Lafayette, Louisiana. This included a collection of two DVD-sets with contents of all issues of T-ED (1954-August 2004), EDL (1980-August 2004), and *all technical digests of the International Electron Devices Meeting*, IEDM (1955-2004) as well as the EDS 50th anniversary celebration commemorative booklet [23]. However, with the online availability of all EDS publications, the archival Collection on DVD is discontinued [7].

## 16. QuestEDS

The IEEE *QuestEDS* was launched as an online *question and answer* member benefit service managed by the EDS Executive Office. This online publication was initiated by VP of Publications, Renuka Jindal and started in the year 2007 with Compact Modeling TC chair, Samar Saha of DSM Solutions, California as the founding EiC [23]. In this publication process EDS members can submit questions online within the EDS Fol and can view the answers provided by EDS experts online. The target turnaround time from the date of submission of online questions to the date of online posting of answer to the question was two weeks. Since 2020, this publication is discontinued [7].

## 17. IEEE Journal of Photovoltaics

In the year 2011, through the efforts of 2011-2012 President Renuka Jindal, VP of publications Samar Saha, and Timothy (Tim) Anderson of the University of Florida, Florida, the Society launched the multi-society publication, the *IEEE Journal of Photovoltaics* (J-PV) [7]. The need for a new publication in this area was initiated via an email from EDS representative *John Meakin* of the University of Delaware, Delaware, to Bill van Der Vort, the Executive Director of EDS and Renuka in October 2008. The inaugural issue of the J-PV was published in July 2011 with Tim as the founding EiC along with an editorial board of associated editors [24]. After Tim stepped down *Angus Rockett* of the Colorado School of Mines was appointed as the EiC of J-PV in January 2021.

## 18. Journal of Electron Devices Society

In the mid-2000s, there was a strong mandate from law makers worldwide to have open access to all publications resulting from government or publicly funded research projects to any readers around the globe irrespective of their societal membership status. In order to address this changing publications paradigm, in December 2011 AdCom in Washington D.C., the senior leadership including 2011-2012 President Renuka Jindal, Junior Past President Cor Claeys, and President-Elect Paul Yu, approved to launch an EDS open access (OA) journal and Renuka was given the responsibility to champion this Open Access idea further. Through timely effort by VP of Publications, Samar Saha in creating and presenting periodical proposals as well as guidance by ExCom members and publications EiCs, the IEEE Periodical Committee (PerCom) approved the EDS OA publication, the *Journal of Electron Devices Society* (J-EDS) in June 2012. In January 2013, the first issue of the J-EDS appeared with Renuka as the founding EiC along with five editors [25]. After Renuka stepped down, *Mikael Ostling* of the KTH Royal Institute of Technology, Sweden was appointed in 2017 and Mikael was replaced by *Enrico Sangiorgi* of the University of Bologna, Italy in 2020 without interruption of publication cycle and processes [7].

## 19. IEEE Journal of Flexible Electronics

In an effort to increase EDS activities in IEEE Region-7 (Canada), the *IEEE Flexible Electronics Technology Conference* (IFETC) was launched in August 2018 through the major efforts of 2016-2017 President Samar Saha, and *Gaozhi (George) Xiao* and *Ta-Ya Chu* of the National Research Council Canada, Canada. In order to complement the IFETC, BoG approved a new publication on flexible electronics at the December 2018 meeting in San Francisco. Following the approval, a proposal for *IEEE Journal on Flexible and Printed Devices* was submitted to IEEE PerCom by EDS President-elect *Meyya Meyyappan* of National Aeronautics and Space Administration (NASA), California. Coincidentally, the IEEE Sensor Council, also submitted a proposal for a *Flexible Electronics Journal on Sensors*. By the advice and effort of the IEEE PerCom, the two proposals were merged into one and approved by PerCom in 2021 creating the multi-society publication, the *IEEE Journal on Flexible Electronics* (J-FLEX) with equal financial sponsorship between EDS and Sensor Council (45% each) and 10% sponsorship by the Circuits and Systems Society. The inaugural issue was published in January 2022 with *Ravinder Dahia* of the University of Glasgow as the founding EiC. In January 2023, Paul Berger of the Ohio State University was appointed as the EiC of the IEEE J-FLEX [7], [26].

## 20. IEEE EDS Magazine

Though the Division I Circuits and Devices Magazine was unsuccessful, ExCom contemplated publishing Society's own magazine with a broad scope of publishing tutorial and review articles, reviews of new books, and so on within the EDS's Fol for the benefit of students and young professionals. In the year 2022, the publication of a Society's own magazine was finally realized through the efforts of 2020 President Meyya Meyyappan, 2021-2023 President *Ravi Todi* of Rivos, California, and VP of Publications and Products Committee (PPC) *Joachim N. Burghartz* of the Institut für Mikroelektronik Stuttgart, Germany. In the same year, the IEEE PerCom approved the publication. The first issue of the *IEEE Electron Devices Magazine* (EDM) was published in June 2023 with Joachim as the founding EiC [7], [27]

## 21. Open Journal on Immersive Displays

Under the leadership of 2021-2023 President Ravi Todi and the PPC VP *Arokia Nathan* of Darwin College, Cambridge, UK, the EDS proposal for an *Open Journal on Immersive Displays* was approved by the IEEE PerCom in November 2022. The inaugural issue is scheduled to be published on January 1, 2024 with Arokia as the founding EiC [7], [28].

## Conclusion

Since the formative years, the Society continues to launch new professional journals on diverse topical areas

of interest to its memberships as well as electron devices global community not only to satisfy their needs for publishing within the electron devices FoI but also to share their expertise with students, engineers, and researchers worldwide. Similar to journal publications, *the Society continues to diversify its conference portfolio within its FoI through sponsorship as well as co-sponsorship, which will be presented in the October 2023 issue of this Newsletter.*

## References

- [1] S.K. Saha, "A Brief History of the IEEE Electron Devices Society: Part I," *IEEE Electron Devices Newsletter*, vol. 30, no. 2, pp. 25-30, 2023. Online: [https://eds.ieee.org/images/files/newsletters/Newsletter\\_Apr23.pdf](https://eds.ieee.org/images/files/newsletters/Newsletter_Apr23.pdf).
- [2] All Issues, *Transactions of the IRE Professional Group on Electron Devices*, vol. PGED-1, pp. c1-c1, Nov., 1952. Online: <https://ieeexplore.ieee.org/xpl/issues?punumber=4639141&isnumber=31540>.
- [3] Table of contents, *Transactions of the IRE Professional Group on Electron Devices*, vol. ED-1, no. 1, pp. c1-c1, Feb., 1954. Online: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1471805>.
- [4] Table of contents, *IRE Transactions on Electron Devices*, vol. ED-2, no. 1, pp. c1-c1, Jan., 1955. Online: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1471914>.
- [5] All Issues, *IRE Transactions on Electron Devices*, 1955-1962. Online: <https://ieeexplore.ieee.org/xpl/issues?punumber=4639142&isnumber=31582>
- [6] All Issues, *IEEE Transactions on Electron Devices*, 1963-present. Online: <https://xplqa30.ieee.org/xpl/issues?punumber=16&isnumber=10081247>.
- [7] IEEE EDS, "About," online: <https://eds.ieee.org/about-eds>, 2023.
- [8] G.L. Pearson and R.H. Haitz, "Foreword: Historical Notes on Important Tubes and Semiconductor Devices," *IEEE Transactions on Electron Devices*, vol. 23, no. 7, pp. 595-596, Jul., 1976. Online: <https://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=31752&punumber=16>.
- [9] S.K. Saha, *FinFET Devices for VLSI Circuits and Systems*, 1st edition, CRC Press, Taylor & Francis Group, Boca Rotan, 2020, doi: <https://doi.org/10.1201/9780429504839>.
- [10] H. Friedrich, W.F. Kosonocky, T. Sugano, "Foreword," *IEEE Transactions Electron on Devices*, vol. 26, no. 4, pp. 257-258, Apr., 1979. doi: 10.1109/T-ED.1979.19422.
- [11] IEEE EDS, "50 years of electron devices: The IEEE electron devices society and its technologies, 1952-2002," online: [https://eds.ieee.org/images/files/About/eds\\_anniversarybooklet.pdf](https://eds.ieee.org/images/files/About/eds_anniversarybooklet.pdf), 2002.
- [12] R. Kingston, G. Wade, E.L. Gordon, and A. Yariv, "Editorial," *IEEE Journal of Quantum Electronics*, vol. 1, no. 1, pp.

1-3, April 1965. Online: <https://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=23054&punumber=3>.

- [13] M.S. Adler, "Message from the outgoing president," *IEEE Electron Devices Newsletter*, vol. 1, no. 1, pp. 3-5, 1994; online: [https://eds.ieee.org/images/files/newsletter/Newsletter\\_July94\\_color.pdf](https://eds.ieee.org/images/files/newsletter/Newsletter_July94_color.pdf).
- [14] *IEEE Journal of Solid-State Circuits*, vol. SC-1, pp. f1-f1, September, 1966. Online: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1049744>.
- [15] G.E. Smith and R.W. Dixon, "Editorial," *IEEE Electron Device Letters*, vol. 1, no. 1, pp. 1-1, Jan. 1980. Online: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1481066>.
- [16] T.G. Giallorenzi, "Announcement," *IEEE/OSA Journal of Lightwave Technology*, vol. LT-1, no. 1, p. 1, March, 1983. Online: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1072093>.
- [17] *Journal of Lightwave Technology*. Online: <https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=50>.
- [18] *IEEE Circuits and Devices Magazine*, online: <https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=101>.
- [19] *IEEE Transactions on Semiconductor Manufacturing*, vol. 1, no. 1, 1988. Online: <https://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=240&punumber=66>.
- [20] *IEEE Journal of Microelectromechanical Systems*, vol. 22, no. 2, April, 2013. Online: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6490356>.
- [21] All Issues, *Electrochemical and Solid-State Letters*. 1998-2012. online: <https://iopscience.iop.org/journal/1944-8775>.
- [22] All Issues, *IEEE Transactions on Device and Materials Reliability*, 2002-present IEEE Xplore. Online: <https://ieeexplore.ieee.org/xpl/issues?punumber=7298&isnumber=9970744>.
- [23] R.P. Jindal, "EDS Publications Committee report," *IEEE Electron Devices Newsletter*, vol. 15, no. 2, p. 14, 2008. Online: [https://eds.ieee.org/images/files/newsletters/newsletter\\_apr08.pdf](https://eds.ieee.org/images/files/newsletters/newsletter_apr08.pdf).
- [24] R.P. Jindal, "Capturing the solar wind," *IEEE Journal of Photovoltaics*, vol. 1, no. 1, pp. 1-2, Jul., 2011. Online: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6055242>.
- [25] R.P. Jindal, "Editorial," *IEEE Journal of Electron Devices Society*, vol. 1, no. 1, pp. 1-8, Jan., 2013. Online: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6471856>.
- [26] *IEEE Journal of Flexible Electronics*, vol. 1, no. 1, 2022. Online: <https://ieeexplore.ieee.org/xpl/issues?punumber=9552934&isnumber=10033126>.
- [27] *IEEE Electron Devices Magazine*, 2023-. Online: <https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=10035030>.
- [28] *IEEE Open Journal on Immersive Displays*. Online: <https://eds.ieee.org/publications/open-journal-on-immersive-displays>.