Society News

EDS Organic Electronics Committee Report

Hagen Klauk

The past chair of the EDS Organic Electronics Committee, Ananth Dodabalapur, the former and current Organic Electronics Committee members, and the editors currently covering organic devices for *IEEE Electron Device Letters* and *IEEE Transactions on Electron Devices*, Arokia Nathan and Jerzy Kanicki, have worked very hard over the past years to increase the visibility of organic electronics in the electron devices community. After the number of contributions on organic devices at the IEDM had been quite low for three years in a row, IEDM 2009 once again featured a full session with a total of six high-quality presentations on organic electronic devices and circuits. In addition, the Organic Microelectronics & Optoelectronics Workshop, held annually in San Francisco in early July and co-sponsored by the American Chemical Society (ACS), the Materials Research Society (MRS), and the IEEE, has grown into one of the most popular gatherings for those working in the areas of organic displays, organic lighting, organic solar cells, and organic transistors.

Meanwhile, there have been a number of exciting and encouraging developments in the area of organic electronics during the past 12 months. Several electronics companies have successfully launched mobile phones and media players sporting full-color active-matrix organic LED (AMOLED) displays with Wide-VGA (WVGA) resolution and screen size between 2.8 and 3.7 inch. Compared with the liquid-crystal displays they are replacing, OLED displays offer enhanced viewing experience and lower power consumption. At least one company has recently started shipping samples of large-area organic LED lighting panels, while several companies are preparing for mass production. Organic LED lighting is expected to become a serious competitor to incandescent and fluorescent indoor lighting in the near future. Flexible organic solar cells that can be used to charge electronic accessories on the go have also become available from at least one company, while another company has recently pushed the world record for organic solar cell efficiency past 7%. The first electronic readers (eReaders) that feature thin, lightweight and shatterproof plastic displays enabled by organic field-effect transistors are expected to become available within a year or two.

The present committee members are:

Ana Claudia Arias (PARC)

Oana Jurchescu (Wake Forest University)

Bernard Kippelen (Georgia Institute of Technology)

Hagen Klauk (Max Planck Institute for Solid State Research, Stuttgart)

Takao Someya (University of Tokyo)

Jana Zaumseil (University Erlangen-Nuremberg)

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EDS Vacuum Devices Technical Committee Report

Richard Carter
Winner IVEC 2009 Award for Excellence in Vacuum Electronics

The EDS Vacuum Devices Technical Committee would like to announce that Professor Richard Carter was presented with the IVEC 2009 Award for Excellence in Vacuum Electronics on 28 April at the Tenth International Vacuum Electronics Conference in Rome.

This prestigious award was made, "For a life-long commitment to education in vacuum electronics and visionary leadership in academia and technical research in the field." It recognizes the international impact of Professor Carter's work over a period of thirty years. His insight and comprehension of the complex mechanisms of vacuum electronics, together with a rare aptitude for synthesis and explanation, have resulted in a widely recognized influence on the way many former students, researchers and people who have attended his lectures think about the theory and modeling of microwave tubes. His lectures, delivered in eight countries, three continents, and in video recordings, have been an invaluable source of knowledge within the international vacuum electronics and

particle accelerator communities. Nearly fifty people have worked with him as research fellows, research assistants and research students over his career. Several of these people now hold leading positions: two are laboratory directors and three head major research groups in the USA, China and India.

Professor Carter's breadth of expertise is demonstrated by innovative contributions on: modeling of helix, coupled-cavity, folded waveguide and other slow-wave structures for traveling-wave tubes (TWTs) with particular emphasis on equivalent circuit definition, performance improvements and large signal aspects; design and simulation of strapped magnetron anodes; beam-wave interaction in klystrons and multi-beam klystrons; and development of methods of cold-test measurement for components used in microwave tubes. He was responsible for developing or overseeing the development of computer codes for large-signal modeling of TWTs and klystrons in the UK. His contributions have been embodied in computer codes that are used in UK, European, and Indian companies and research laboratories for computer-aided design of microwave tubes.

Appointed to the staff of the Engineering Department of Lancaster University in 1972, Richard Carter was promoted to a Chair in 1996. He was influential in the formation of the Faraday Partnership in High Power Radio-Frequency Engineering in 2001 and the Cockcroft Institute of Accelerator Science and Technology in 2004. He is an IEEE Electron Devices Society Distinguished Lecturer and has been a member of the Technical Committee on Vacuum Electronics since its formation in 1998.

The International Vacuum Electronics Conference IVEC 2009 was held in Rome, Italy, 28–30 April 2009. The meeting, attended by more than 250 delegates, took place at the Angelicum, Pontifical University of Saint Thomas Aquinas and was sponsored by the European Space Agency with the technical co-sponsorship of the IEEE Electron Devices Society (EDS) and the support of the University of Rome Tor Vergata. IVEC was originally created in 2000 by merging the US Power Tubes Conferences and the European Space Agency TWTA Workshops, and has now expanded to a fully international conference, being held every other year in the US, and in Europe and Asia alternately every fourth year. After Kitakyushu, Japan in 2007 and Monterey, USA in 2008, IVEC 2009 returned to Europe for the celebration of its tenth anniversary in the magnificent city of Rome. For information on IVEC 2010, please visit the conference web site, http://www.ivec2010.org/.

The IVEC Award for Excellence in Vacuum Electronics was established in 2002 to recognize outstanding contributions to the field. Anyone or any group of persons working in the field of vacuum electronics is eligible for this award, which will be presented each year during the IVEC conference. Anyone in the field may place a colleague in nomination. Selection of the winner will be made by a vote of the members of the Technical Committee. Members of the Technical Committee who are nominees may not vote. Only living persons are eligible for the award. The winner will receive a commemorative plaque and an award of $2,000. If a group nomination is selected for the award they will each receive a plaque and share the $2,000.

Previous recipients of the IVEC Award for Excellence in Vacuum Electronics:

2002 – Armand Staprans, Communication and Power Industries, USA
2003 – George Caryotakis, Stanford Linear Accelerator, USA
2004 – Georges Fleury, Thales Electron Devices, France
2005 – Joe Saloom, Technical Consultant, USA
2006 – Jim Dayton Jr., Genvac Aerospace Corp., USA
2007 – Baruch Levush, Naval Research Laboratory, USA
2008 – Manfred Thumm, University of Karlsruhe, Germany
2009 – Richard Carter, Lancaster University, UK

Dan M. Goebel
EDS Vacuum Devices Technical Committee Chair
Jet Propulsion Laboratory
Pasadena, CA, USA

2011 IEEE Call for Fellow Nominations

Nominate a Colleague

If you are considering nominating a colleague from industry, government, or academia for elevation to IEEE Fellow grade, the opportunity to do so is here. This prestigious group now numbers over 6000 out of IEEE's total of nearly 380,000 members. These Fellows are the visionaries, the pioneers, and technology leaders in their field as well influential members in the international community. IEEE Senior members or Life Senior members in good standing, who have completed five years of service in any grade of IEEE Membership and who have made an outstanding contribution to the electronic or electrical engineering profession may be nominated in one of four categories: application engineer/practitioner, educator, research