

ECS Affiliates News



ECS Welcomes New Staff Member

TROY M. MILLER joined the ECS staff in May as Director of Development. He is a 1993 cum laude graduate of Temple University where he earned a bachelors degree in English and a minor in writing.

Troy began his career at the Temple University Development Office. He was the Managing Editor for the international antique motorcycle magazine *Classic Cycle Review*, and the Major Gifts Director for the United Way of the Capital Region in Harrisburg, Pennsylvania.

Troy and his wife Beth have a two-year old son, Peyton, and enjoy spending time outside, picnicking, and traveling.

While not at ECS, Troy enjoys hiking, playing golf, reading, writing, and collecting historically significant art and books.

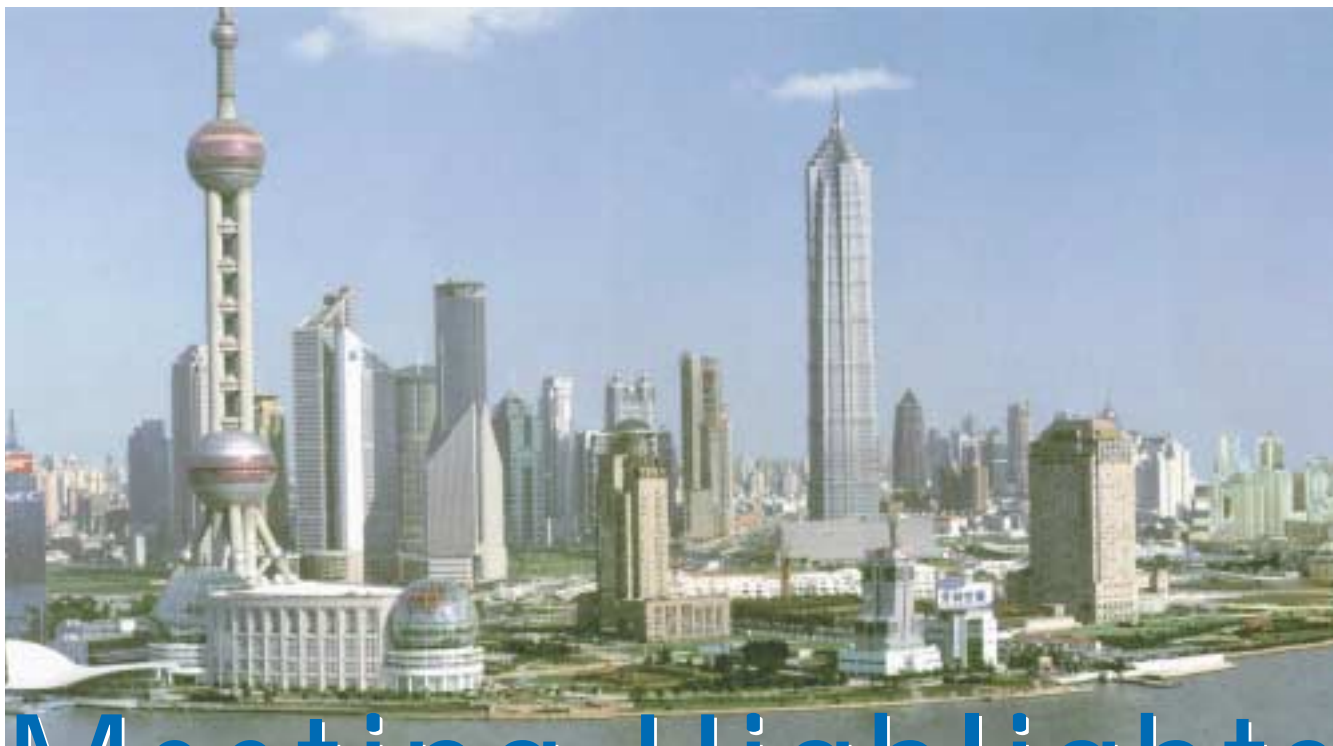
ECS Executive Director Roque Calvo said, "We are pleased to welcome Troy to the ECS staff. The Society has been making progress in many programmatic areas in the past few years and we are excited to be underway in establishing development initiatives to further support these activities." Society members can look forward to more information about these areas in future issues of *Interface*. ■

DURACELL has upgraded its Contributing Membership to the Sponsoring level. Duracell, Incorporated is the world's leading manufacturer and marketer of high-performance alkaline batteries and other consumer batteries. Duracell continues to meet the growing global demand for longer-lasting batteries with technology advances and value-added product innovations. In addition to alkaline batteries, Duracell markets rechargeable lithium ion and nickel metal hydride batteries, primary lithium, and zinc air batteries. Duracell also offers strategic power-consulting services to leading device manufacturers to further the inclusion of alkaline batteries as a power source in these increasingly popular consumer devices. Visit the company at www.duracell.com.

DANIONICS recently joined the Affiliates program as a Contributing Member at

the Sustaining level. Danionics, headquartered in Odense, Denmark, is a leading European developer and manufacturer of a new generation of batteries and supercapacitors for commercial application in the portable electronics industries. The batteries are based on lithium-ion polymer technology, for which the company has developed its own proprietary technology. Visit the company at www.danionics.com.

The ECS Affiliates program allows Affiliates to take advantage of new opportunities of special advertising and exhibiting offers. Learn more about the program on the Web: www.electrochem.org/affiliates.html, or call Barbara Baggott, ECS Affiliates Coordinator at 609. 737.1902, ext.103. ■



Meeting Highlights

International Semiconductor Technology Conference 2001 Shanghai, China

Not Your Usual ECS Meeting

The brilliantly colored lights illuminating the Bund and skyline of Shanghai, directly across the Hangpu River from the Pudong Shangri-La Hotel, was one of the first signs to conference attendees that this was not going to be just another meeting of The Electrochemical Society. The ten-course conference banquet that featured acrobats, cyclists, jugglers, and Chinese folk songs was another. Indeed the meeting was unique and historic in several regards: it was the first ECS International Semiconductor Technology Conference (ISTC) and it was the Society's first major meeting in China. Not only was it an opportunity for ECS to reach out to its international members, but it also gave visitors to China a first-hand look at a truly 21st century city—with seemingly hundreds of ultra-modern skyscrapers dotting the skyline on both sides of the river.

The meeting was well attended by top-level corporate executives interested in exploring new business opportunities in China. Key Chinese government and academic leaders took a strong personal interest in the meeting and used it as an opportunity to showcase the investment that is currently being made in high technology development in China. The meeting received front-page newspaper coverage in Shanghai. It was followed by delegation visits to the leading universities and laboratories in Shanghai and Beijing.

Held from May 27 to 30, ISTC featured over 180 papers and presentations in the area of semiconductor technology. Conference Chairman Dr. Ming Yang delivered the opening remarks. Dr. Carlton Osburn, 2000-2001 ECS President, addressed the meeting on behalf of the Society. Mr. Jiang Shang-Zhou, Vice Chairman of the Shanghai Economic Commission, also welcomed the attendees. He stressed the significance of the ISTC meeting in the city and spoke about the current economic situation of Shanghai and its advantages to developing high-tech industries.

The conference was honored to have its plenary address given by Jack Kilby, the winner of the Nobel Prize in Physics in 2000 for his invention of the integrated circuit. Dr. Kilby described how electronic circuits were initially assembled from discrete components and the events that led to his invention of the IC. This has led to the spectacular growth of the semiconductor industry and the revolutionary changes in the field over the past 40 years. He also spoke of the growth of the IC world in Asia.

Dr. Kilby was followed by several keynote speeches. Simon Sze from National Chiao Tung University focused his speech on microelectronic technology challenges in the 21st century with the four biggest being large wafer technology, sub-100 nm lithography, deca-nano devices, and interconnects. He noted that industry should continue to cut down production



ISTC organizers and keynote speakers—
 (bottom row, left to right) X. C. LIU, T. OHMI,
 Y. L. QIU, J. KILBY, D. X. WU, M. YANG, and
 Q. X. XU; (top row, left to right) X. L. HUANG,
 B. MILNE, G. S. YUAN, C. OSBURN, Y. NISHI,
 T. HATTORI, C. K. HU, M. KOYANAGI,
 Z. S. HAN, and Q. G. LIU.

costs and create new applications to broaden the electronics market.

David Wang, Senior Vice President, Applied Materials, talked about trends, future growth, and opportunities for the semiconductor industry. He said, that with the development of the Internet, semiconductor applications will pervade every corner of the world, but manufacturers will need to meet evolving competitive challenges. In this era of explosive technological transformation, he said that three waves will appear—the 1st wave: smaller geometry, the 2nd wave: new materials, and the 3rd wave: larger wafer size (300 mm)—and that these three waves will create new price–performance paradigms.

Yoshio Nishi, Senior Vice President, Texas Instruments (TI), spoke about future research and development directions for the semiconductor industry. He said that silicon technology trends would continue, with CMOS as the dominant design and cost affordability a key theme. He went on to say that he felt there would be global collaboration in R&D with accelerated and greater pre-competitive sharing and collaboration. He noted that industry and academic relationships would become closer through joint research and education.

Dr. George Wang, Director of IBM China, addressed the Monday luncheon. Following the Monday evening reception, a panel discussion was held on the topic of “Globalization of the Semiconductor Industry and Technology.” Gerald Kuo, TI China General Manager hosted a banquet on Tuesday evening. He reviewed TI’s Digital Light Processing (DLP) work of the past ten years and demonstrated the technology with movies shown on DLP projectors.

During the week, parallel technical sessions were held on topics that included device technology and process integration, high and low k materials and reliability, silicon oxidation technology, thin film technology, copper technology, CMP, silicide technology, and plasma etching. In the exhibit hall, Tokyo Electron Ltd., KLA-Tencor, Applied Materials China, and Texas Instruments exhibited their products and new technologies.

Two hardbound proceeding volumes, containing the papers, were distributed to attendees at the meeting.

At the closing ceremony dinner banquet, ISTC Chairman Ming Yang and ECS Past President Carl Osburn presented a certificate of recognition to Jack Kilby on behalf of The Electrochemical Society. At that time the Best Student Paper award was presented to Riyaz Rashid from Trinity College (UK). Dr. Gary Dickinson, KLA-Tencor Chief Operating Officer, the keynote speaker for the dinner banquet, discussed yield challenges of the 0.13 μm node and below.

Following the meeting, Dr. Yang organized and led a delegation of leading industry and academic leaders from Europe, Japan, Korea, and the U.S. Dr. Carlton Osburn said, “I had the good fortune of representing ECS. We visited Shanghai Jiao Tong and Fudan Universities in Shanghai, and Tsinghua and Peking Universities, as well as the Chinese Academy of Sciences, in Beijing. The highlight of all the university visits was a talk by Jack Kilby followed by a question and answer period. The questions were universal: How much longer do you expect silicon technology to last? What about molecular or quantum computers? What will be the roles of biosensors and MEMS devices? We had an audience with the mayors of both Shanghai and Beijing. I can vividly picture the mayor of Beijing fluently discussing the technical issues associated with the transition from 200 to 300 mm silicon wafers and from 0.25 to 0.18 μm lithography!”

Special thanks for the success of the meeting are owed to Ming Yang, the Conference Chairman, and to Yue Kuo and Swami Mathad, the Co-Chairmen, as well as to Elizabeth Brennfleck and the ECS Staff for managing the meeting. ■

This article was contributed by Dr. Carlton Osburn, 2000-2001 ECS President, and Dr. Lei Li, on behalf of Conference Chairman Ming Yang.

The ECS *Journal* Goes “E-First”

Articles Now Published as Available

There's great news for ECS readers and authors—the *Journal of The Electrochemical Society* (JES), beginning with the July 2001 issue, is now an “e-first” (electronic-first) publication. This means that each article will be published as soon as it has been prepared for online posting, without waiting for an entire issue to be completed. These e-first articles are complete, final articles, with content identical to what will appear in the monthly print edition. Online articles contain final bibliographic citation information (including page numbers corresponding to the print edition) and are fully citable.

Electrochemical and Solid-State Letters (ESL), the rapid-publication companion to JES, has been committed to e-first mode since its inception. Now articles in both ECS journals are published online quickly and with a high degree of functionality. The fast delivery time and the many online features of articles in ECS journals are the result of ECS's selection of the American Institute of Physics (AIP) Online Journal Publishing

Service (OJPS) for the production and distribution of its technical serial publications. ECS journals can be accessed from both the ECS web site (<http://www.electrochem.org/>) and from the OJPS site (<http://ojps.aip.org/JES/>) and (<http://ojps.aip.org/ESL/>).

E-first provides authors and readers with the fastest possible delivery of accepted manuscripts. ECS is proud to offer e-first publication for its journals and we welcome your feedback. Please send your comments to publications@electrochem.org. ■

The Benefits of Membership Can Be Yours!

- **Journal of The Electrochemical Society**—ECS membership includes this top-quality, peer-reviewed monthly publication. Each issue includes more than 60 original papers selected by a prestigious editorial board on topics covering both electrochemical and solid-state science & technology. Papers are published as available at www3.electrochem.org/journal.html.
- **Electrochemical and Solid-State Letters**—ECS's rapid-publication, electronic journal. Papers are published as available at www3.electrochem.org/letters.html. This peer-reviewed journal, also a member benefit, covers the leading edge in research and development in all fields of interest to ECS. It is a joint publication of the ECS and the IEEE Electron Devices Society. Both the *Journal* and *Letters* are produced on the American Institute of Physics OJPS platform.
- **Members Magazine**—ECS members also receive *Interface*, a quarterly publication which features topical scientific articles, news about people and events, and announcements of upcoming meetings.
- **Professional Development and Education**—Exchange technical ideas and advances at ECS's two comprehensive meetings in the spring and fall of each year, or through the programs of 23 Sections in the United States, Canada, Europe, Japan, and Brazil.
- **Publications**—Keep aware of pertinent scientific and technological advances through the variety of ECS publications, including proceedings volumes, meeting abstracts, and monograph volumes.
- **Opportunity for Recognition**—Recognize the accomplishments of your friends and peers through the Honors and Awards Program, which includes over two dozen Society, Division, Group, and Section awards and the distinguished ECS Fellow designation.
- **Membership Directory**—Available only to members, the directory provides an easy reference to colleagues throughout the world.

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