

# Candidates for Society Office

*The following are biographical sketches and candidacy statements of the nominated candidates for the annual election of officers for the Society. Ballots will be mailed, in January 2004, to all Voting Members of the Society. Offices not affected by this election are those of the other Vice-Presidents—William Smyrl and Mark Allendorf; and the Treasurer, Peter Fedkiw.*

## Candidate for President



**ROBIN SUSKO**, a Senior Technical Staff Member with IBM's Microelectronics Division in East Fishkill, New York, is responsible for driving strategic aspects of electronic packaging materials, processing

metallization, assembly, and associated reliability and performance in the Products and Packaging Quality and Reliability Organization. Prior to joining IBM, Susko worked for Sprague Electric's Hybrid Division in Worcester, Massachusetts, as a semiconductor process engineer. At IBM, Susko has had extensive experience in product risk analysis, development of test methods critical to reliability, yields and field performance, development of state-of-the-art power cards for IBM's personal computers, plasma process development and implementation for advanced printed wiring boards, alpha particle barrier development for semiconductor packaging, and polymer formulations including application in advanced electronic packages. Susko represents IBM in key JEDEC, IPC, and SEMATEC committees pertaining to product quality and reliability. She has been commended by these organizations for her work, most recently receiving JEDEC's top honor, The Award of Excellence. Susko has also been recognized through IBM divisional, Invention Value, Invention Achievement, and Publication Achievement awards.

Susko received a BS in chemistry from Rensselaer Polytechnic Institute. Since then, she's been granted 25 U.S. and foreign patents for polymeric formulations, plasma processing, and semiconductor packaging design and reliability performance. In addition, she has published numerous bulletins and over 40 papers on various aspects of semiconductor packaging, processing, reliability performance, and qualification test philosophy and strategy.

As a Society member, Susko has organized symposia on key aspects of electronic packaging, materials, processing, metallization, and reliability and co-edited a number of proceedings volumes on these subjects. In 2003, she was elected a Fellow of ECS. She has previously held positions as the Secretary of the Society;

*(continued on page 14)*

## Candidates for Vice-President



**BARRY MACDOUGALL** is a Principal Research Officer at the National Research Council (NRC) of Canada, where he has worked for the past 30 years. He heads the Electrochemical Process Technology

Group in the Institute for Chemical Process and Environmental Technology. He received his Honors BSc from St. Francis Xavier University in Nova Scotia and his PhD in electrochemistry from the University of Ottawa under the supervision of Brian Conway. He joined the NRC as a post-doctoral fellow with Morris Cohen in the "Corrosion Group" of the Division of Chemistry, and became a full NRC staff member in 1974. In 1990, Dr. MacDougall's research focus switched to semiconductor and microstructural electrochemistry, and in 1992 he set up his present research group. That group has grown significantly over the past eleven years, with the emphasis being on environmental electrochemistry, electrocatalysis, energy conversion/storage, electrochemical reduction of CO<sub>2</sub>, and process technology. Dr. MacDougall has 101 scientific papers, four active patents and four book chapters. He is also an adjunct professor in the Department of Chemistry at the University of Ottawa.

Dr. MacDougall has been a member of ECS for more than 28 years, and was the chairman of the Ontario-Quebec (now the Canadian) Section in 1979-1980. Along with several other senior members of the Section, he initiated the Section name change and established the Canadian Award of the Section. He received both the Lash Miller (1979) and Jacobsen (1990) Awards of the Canadian Section. He served on the Corrosion Division of ECS from 1984 to 1996, and was chairman from 1994 to 1996. He helped establish the Corrosion Division's Morris Cohen Young Investigator Award in 1991, named after his former mentor at NRC. He co-organized symposia on Anodic Oxide Films in 1981, 1985, 1992, and 2000, continuing the long-established series begun in the late fifties. He has co-organized several other symposia, including one to honor Prof. Norio Sato at the 1999 meeting in Hawaii. Dr. MacDougall became a member of the ECS Honors and

*(continued on page 14)*



**ESTHER S. TAKEUCHI** is the Vice-President of Battery Research and Development at Wilson Greatbatch Technologies. Since joining Wilson Greatbatch Technologies in 1984 as a senior scientist, she has remained

active in research and development throughout her career, while assuming roles of increasing managerial responsibility. Dr. Takeuchi's expertise centers on the chemistry and design of lithium batteries, in particular sophisticated battery systems for implantable medical applications. Her work has played both central and fundamental roles in the development and improvement of lithium battery systems that power devices such as neurostimulators, drug delivery devices, and implantable cardiac defibrillators. Notably, the lithium/silver vanadium oxide system she and her team developed is still used to power more than 90% of the cardiac defibrillators implanted 15 years since its first introduction, having a profoundly positive impact on hundreds of thousands of lives. Dr. Takeuchi has worked hard to publish and communicate her work in various formats: she is the co-author of over 50 papers, articles or book chapters, over 80 talks or lectures, and a co-inventor of over 90 patents.

Dr. Takeuchi's achievements have been recognized on a number of occasions. In 1990, the Community Advisory Council of the State University at Buffalo named her Woman of the Year in science for her outstanding achievement in the development of medical batteries. In 1995, she was awarded the Battery Division Technology Award of The Electrochemical Society for the development of lithium/silver vanadium oxide batteries used to power implantable cardiac defibrillators. Wilson Greatbatch recognized her in 1997 as Visionary of the Year, an annual award presented for exemplary achievement. In 1998, Dr. Takeuchi was presented with the Jacob F. Schoellkopf Award by the Western New York section of the American Chemical Society for creative research in batteries for medical applications. In addition, she was inducted into the Western New York Women's Hall of Fame that year. The following year, she was recognized as a Fellow by the

*(continued on page 15)*

## Candidates for Secretary



**JOHN SUSKO** is Director of Product Development at Technical Consumer Products, Inc. (TCP), a leading compact fluorescent manufacturer, and is responsible for the research and development of state-of-

the-art energy efficient fluorescent lighting products and energy management systems. TCP acquired this technology from JRS Technology, which Susko founded in 1993, and for which he served as president and CEO. Prior to this, Susko was a Senior Engineer at IBM where he held engineering and management positions in the research and development of advanced technologies and materials engineering critical to IBM. As technical advisor to the Division Laboratory Director he developed the IBM strategic roadmap for electronic packaging technology and served as the technical planning liaison for the construction of an \$86M development facility. Other technical and managerial responsibilities included development of kinetics models for the permeation and diffusion of moisture and environmental pollutants through polymeric materials, development of thin film high density interconnect packages, and creation of the first commercial gigabit optoelectronic transceiver for IBM's high end systems. Before joining IBM, Susko was a chemistry instructor at Broome Technical Community College. Susko has over 30 publications, including two in the *IBM Journal of Research and Development*. He holds 7 U.S. patents with another 10 patents pending. Susko received his BS in chemistry from Elmira College, where he graduated with honors.

As an ECS member, Susko has served the Society on numerous committees including Ways & Means, Publication, Education, Individual Membership, and the Board of Directors. Under his leadership, the education *ad hoc* committee on student participation created the white paper report justifying the need for the very successful Society Student Poster Session. As chairman of the Individual Membership Committee, he led the effort that improved the membership application process by implementing the non-member registration conversion option, which consistently retains 40% of these applicants as ECS members. He is currently teaching the resume writing and interviewing workshops given at each Society meeting, which are instrumental in assisting students and experienced professionals to improve their chances for employment. Susko has been a member of the Society since 1984 and been active in the Dielectric Science and Technology Division where he served as Division

(continued on page 16)



**PETR VANYSEK** received his undergraduate and graduate degrees in Prague, from the Charles University and the Czechoslovak Academy of Sciences, respectively. After graduation, he made the USA his home, first as a postdoctor-

al fellow at the University of North Carolina at Chapel Hill, then as a Faculty-at-Large at the University of New Hampshire, and then as a tenured faculty member at Northern Illinois University. From 2000 to 2002, Dr. Vanysek was employed as a principal scientist at ACLARA BioSciences, Inc. in Mountain View, CA, working on the development of new detection schemes in microfluidic systems, data interpretation, and instrumentation.

Vanysek's main research interests have been focused on the electrochemical behavior of the interface between two immiscible phases, specifically on the analytical applications of such interfaces as well as on achieving a deeper understanding of their properties. Presently he is using synchrotron x-rays to probe these interfaces. He also developed particular expertise in analytical instrumentation and in electrochemical impedance techniques. His research increasingly spans both sides of the electrochemical interests, the "wet" in electroanalysis and the "dry" in the materials science area, examples being the parallel investigation of corrosion inhibition and oxide formation on noble and valve metals. He has also studied various sensors, such as modified polyaniline, and their applications.

Vanysek has about 70 journal publications, two patents, several edited and co-edited books, and a monograph on the electrochemistry of liquid/liquid interfaces. His interests in electrochemistry are reflected by his activities with The Electrochemical Society. Locally, he has served for many years on the executive committee of the Chicago Section. He has been also the vice-chair and then the chair of the Sensor Division. His interests in fundamental science have led to his recent election to the executive committee of the Physical Electrochemistry Division, for which he is now secretary-treasurer. At the Society level, he is also serving on the Technical Affairs Committee, the New Technology Subcommittee, and is the past chair of the Council of Sections. A member of the Society since 1986, he has organized or co-organized many symposia, five of which generated successful proceedings volumes. His most recent contribution to Society activities were three articles related to Society history of the Sensor

(continued on page 17)

## ROBIN SUSKO

(continued from page 12)

Dielectric Science and Technology Division Secretary, Treasurer, Vice-Chair, and Chair, and is currently a member of the Division's governing body. Susko has also served on numerous Society committees, including Executive, Publication, Ways and Means, Technical Affairs, Education, Finance, Honors and Awards, Society Meeting, Contributing Membership, as well as the Board of Directors. ■

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## BARRY MACDOUGALL

(continued from page 12)

Awards Committee in 1996, and served for the next four years as chairman of the Fellows Selection Subcommittee. In 2000, he became chairman of the Honors and Awards Committee. Over the years, he has served on the Society's Long Range Planning Committee, the Society Nominating Committee; and he was significantly involved with the 2002 ECS Centennial Meeting, and its banquet, in Philadelphia. From 1984 to 1992, Dr. MacDougall was a Divisional Editor of the *Journal of The Electrochemical Society*. He

received a Young Authors Award of ECS in 1976, and the Society's Carl Wagner Award in 1995. He is a Fellow of the National Association of Corrosion Engineers (NACE) and the Chemical Institute of Canada (CIC).

### Candidate's Statement

It is indeed an honor and privilege for me to be a candidate for Vice-President of The Electrochemical Society. I have been a member for more than 28 years, and have benefited both personally and professionally from the collegial nature of the Society and its members, as well as the high level of scientific activity in both the printed and verbal formats. During those 28+ years, I have witnessed a significant evolution of the Society on many fronts. We have expanded internationally and now have a strong presence in Europe and Asia, Sections in various parts of the world, as well as meetings outside of North America. ECS, as the only international society representing both the wet and dry side of electrochemistry, has the major responsibility of tying together the worldwide electrochemical community. It is interesting to note that the Society membership has grown from 4,150 in 1975 to about 8,000 today, i.e. a 90% increase, with the corresponding ratio of national to international membership changing from ca. 70/30 to

ca. 55/45. We now have members in more than 70 countries. The message is that ECS has been very successful at substantially increasing its international profile in the past 28 years, but we need to continue to strengthen our efforts in this important area. I believe that our international outreach will continue to be a major, evolving focus for the Executive Committee and Board of Directors, and I believe that I would be able to make a major contribution to these efforts as a member of the ECS Executive Committee.

At the same time, the Society must maintain its high level of scientific relevance and its excellent reputation, even while growing both nationally and internationally. The *Journal*, *Letters*, and *Interface*, as well as meeting symposia, proceeding volumes, and monograph series volumes provide our all-important means of "scientific information transfer." This was the original "raison d'être" for the Society, and continues to be its primary mandate. Our bi-annual meetings continue to provide the opportunity for face-to-face exchange of information about scientific advances in all areas of electrochemistry. While continuing to be very successful, we need to address the all-important issue of logistics, and make certain that symposia have meeting rooms that are large enough to hold the assembled audience members, who may have traveled great distances to

hear particular presentations. We need to also ensure that content overlap between the multiple symposia is minimized as much as is humanly possible, and that the younger members of our Society have the opportunity to present their research in the oral, as well as the poster, formats. While these are common sense (even somewhat mundane) issues, I know that they are extremely important to our members who travel to meetings in the hope of hearing about, and openly discussing, what is new in their particular area of electrochemistry. I believe these are issues that need to be addressed, and require us to work closely with symposia organizers and meeting planners.

The Society continues to disseminate vast amounts of scientific information in the written form, mainly through the Journal. Electronic submission and publication of papers have permitted the rapid flow of information globally. The key step in the process is still peer review, and the Society is most fortunate in having able and willing peer reviewers as well as very hard-working associate editors and a strong Publication Committee. We need to continue to maintain the all-important balance between increasing membership, number of papers published, speed of review and dissemination, as well as the scientific quality of the printed product. Long after all of us are gone from the scene, our published

scientific contributions will remain as our legacy to future generations, indicating just how diligent and serious we were as electrochemists.

Having served on the Honors and Awards Committee for more than seven years, I have been part of the evolution of a number of new, prestigious awards, including the Charles W. Tobias Young Investigator Award, the Oronzio de Nora Industrial Electrochemistry Fellowship and the European Section Heinz Gerischer Award. They highlight the growing international outreach of our Society and the important involvement of the younger ECS members. As with our other Society, Division, and Section Awards, their significance derives from the scientific stature and reputation of the Society itself, which has been built over the last 100 plus years. The goal of our founding members in Philadelphia in 1902 was to provide a means for electrochemists to openly discuss developments in the field and learn from each other, in order to facilitate the advance of electrochemistry. This is still true today for ECS, no matter how hectic the world has become in the past 100+ years, and will most probably be true 100 years from now. I look forward to the opportunity of serving on the Executive Committee, if elected, and of using my 28+ years of experience in ECS to carefully guide us into new future directions, while

retaining our underlying strength and scientific credibility. ■

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## ESTHER TAKEUCHI

*(continued from page 12)*

American Institute for Medical and Biological Engineering. In 2003, Dr. Takeuchi was named a Woman of Distinction by the American Association of University Women, and in the same year was presented with the Achievement in Healthcare Award by D'Youville College.

Prior to joining Wilson Greatbatch Ltd., Dr. Takeuchi received a bachelor's degree from the University of Pennsylvania with a double major in chemistry and history and completed a PhD in chemistry at the Ohio State University. She also conducted post-doctoral work at the University of North Carolina and the State University of New York at Buffalo before joining Wilson Greatbatch.

Dr. Takeuchi has demonstrated her enthusiasm for science by her activity in The Electrochemical Society. She has been a member of the organization since 1984 and has served in several roles since that time. She served as treasurer of the Battery Division, followed by secretary and then chair of the Division from 2001-2002. She

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## ESTHER TAKEUCHI

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has also chaired the Battery Division Research Award committee. In addition, she has served on the Individual Membership and Ways and Means Committees of ECS and is currently a member of the Technical Affairs Committee, the *ad hoc* Development Committee as well as the Nanotechnology Subcommittee. Finally, she has organized numerous symposia covering topics in batteries and power sources. She is currently on the organizing committee for the International Meeting on Lithium Batteries held every two years and co-sponsored by ECS.

### Candidate's Statement

It was with great honor that I accepted the invitation to be a candidate for Vice-President of the Society. Since the invitation to be a candidate, I have taken the opportunity to reflect on the strengths of ECS and the role of the Society leadership. To solve complex and important scientific problems, many different perspectives are needed. ECS is the preeminent society for solid-state, materials, and electrochemical science and technology because it provides a singular arena for the open exchange of ideas and engagement of interdisciplinary problem solving among its diverse members. The Society is exemplary in its ability to bring together members of the larger scientific community from disparate roles including academics, industry, and government. In addition, Society members hail from varied scientific backgrounds in physics, chemistry, engineering, and materials science. The global reach of the Society has been key to its success. The Society has successfully encouraged participation by members from over 70 countries, holding meetings outside of the U.S. and encouraging engagement and co-sponsorship by numerous international organizations. In particular, the technical meetings are an important forum for diverse voices to discuss fundamental science and applications technology. However, the successful distribution of scientific information has not been limited to the technical meetings. The Society Journal is a long-standing and highly regarded publication. More recently, the addition of Letters has enhanced the ability to publish short communications quickly. In addition, Interface provides members scientific and society information that is relevant to all.

The successes over the past 100 years are a tribute to the quality and enthusiasm of the staff, the leadership, and the membership. The overall goals of the Society are to serve its members and promote the exchange of scientific ideas to advance progress in solid-state science as well as electrochemistry. As a member of the leadership team, I would encourage

the engagement and participation of the membership to assist in determining the future direction of the organization in an increasingly dynamic technical environment. In addition, the following initiatives already well underway would be encouraged.

- Support the transition to electronic media as a means of information dissemination. Use of electronic and Internet tools reduces costs, increases speed of access, and broadens availability. Electronic access to Journal articles, proceedings volumes, and meeting abstracts, as well as instructional materials are all valuable ways to continually enhance the Society's impact.
- Continue to grow the Society membership. Continued growth can be achieved by supporting and increasing outreach to students and the global scientific community. Engagement of students can be enhanced by expanding both the recognition of student technical achievement and the distribution of travel awards. Global outreach should be continued and expanded by conducting and sponsoring meetings in international locations and engaging with partner societies in Europe, Japan, and other sections of the world.
- Maintain the financial well being of the Society. Fiscally responsible decision making and expanded development efforts must continue to ensure the success of the Society over the next 100 years. ■

## JOHN SUSKO

(continued from page 13)

chair, vice-chair, treasurer and secretary. He has organized a number of symposia including the well-received Metallized Plastics series, and he has co-authored proceedings volumes and books on the subject.

### Candidate's Statement

As a long-standing member, I have great pride in our Society and will provide the leadership essential to the growth and development of ECS so it continues to be the premier professional organization in the areas of electrochemistry and solid-state science and technology. As candidate for Secretary, I view my role in The Electrochemical Society as an advocate for promoting continued improvement of the Society consistent with the requirements and needs of the Divisions, Sections, and the membership. Because the Secretary is a liaison between the ECS staff, the Board of Directors, ECS committees and our membership, I believe my business and management experience will be valuable for recognizing and understanding their needs and to act as a catalyst in developing and promoting solutions consistent with

the current and future direction of the Society.

My vision for the Society is one of continued growth through distinction. To achieve this vision, we must continue to recognize and analyze the Society's strengths and weaknesses and be prepared to make the necessary improvements to ensure future growth and success of the Society. As Secretary, my goal is to promote global awareness of the Society and the extensive interdisciplinary technical benefits we offer. Currently our Society relies on our excellent publications, technical meetings, and website. Continued initiatives are needed, especially with respect to online publication links access, past issue electronic retrieval capability, and electronically personalized proceedings volumes of topical interest. Firm alliances, with information consolidators, are required to properly position our Society in the rapidly changing world of electronic information dissemination. Additionally, our website needs future enhancement with interactive displays aimed at attracting young scientists to our Society and its fields of interest. Future revisions should include meeting format changes to promote more specialized topics; inter-Divisional and inter-society symposia, with leading edge topics; increased use of Interface to promote the Society to nonmembers; and incorporation of the Ad Hoc Committee on Long Range Planning initiatives on Society Sections, symposium planning, student participation, and education strategy.

Our membership has a wealth of diverse talent, from universities, government labs and industry. I firmly believe our members are ECS's greatest asset, and as such, recruiting new members and retaining current members are critical elements of the Society's future. Excellent sources for new members are college students as well as nonmember attendees at our technical meetings. While recruitment initiatives currently exist, they could be improved. We must actively develop long-term relationships with universities, government agencies, and industrial sectors, and enhance initiatives to attract young talent to our Society. We need to continue focus with our international technical community through co-sponsorship of worldwide topical symposia. We also should consider the formation of new ECS Sections. Equally important is the retention of current ECS members. Our membership continues to experience increased budgetary constraints in industry, government, and academia. By providing excellence in the papers we publish, the symposia we sponsor, the strategic technology initiatives we pursue, and the benefits we offer, both technical and professional, members can justify their participation in The Electrochemical Society.

The goals discussed above cover a wide range of topics. I strongly believe they are essential to the growth and long-term success of ECS, and will professionally benefit our current and future members. I also

believe my broad business, management, and technology experience will help achieve these goals and keep the Society as the leader in electrochemistry and solid-state science and technology for the twenty-first century. ■

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## PETR VANYSEK

*(continued from page 13)*

Division, the history of the Chicago Section, and the role of Council of Sections, prepared for the Centennial celebration in Philadelphia and published in the "1902-2002: A Centennial History" book.

### Candidate's Statement

Being a candidate for the secretary of the Society is a distinct honor. It is also a demonstration of trust in my capabilities by the nominating committee. The Secretary's main function in the Society

is to interface, as an elected officer, with headquarters, specifically with the Executive Director. We have grown accustomed to expecting excellent service from the Society in terms of meeting organization and in the publication sector. We expect this to continue. I will look to the past and retain conservatism to protect what we know and what works for us. But new technology and new styles of research, as well as challenges related to new research directions, are bringing on new opportunities and new difficulties. Thus, I will look to the future to predict what will benefit our Society and maintain its stability. I will also make appropriate recommendations to embrace new areas of science and technology, as well as to preserve the existing quality of the Society to assure the lasting interest of the present membership and to attract the new generation working in the field of electrochemistry and solid-state science. I will look for guidance and inspiration from the present membership. However, as a university professor, I am also well attuned to the needs of new graduates and I can take their concerns

and needs and guide the Society in a direction that will face head-on the present and new needs of our potential new members.

The Secretary has a number of "routine" duties. I am quite familiar with such duties and know that they take time, which I am willing to invest. I will bring my skills as my contribution to the Society, so that when I will be reporting to the Board of Directors at each of its meetings on the condition of the affairs of the Society, I will be reporting on conditions that are positive.

With my research interests in each of the loosely defined "wet" and "dry" sides of the Society and with my experience in both the academic and industrial environment, I believe that I have the needed background and skills for this important task. I know many members personally and likewise, I know well the internal workings of many of the Society committees. Thus, I can address, even anticipate, the needs of very broad membership. If elected, I will use my experience to do the most responsible and innovative work possible as the Secretary of the Society. ■