A Look Back at Our Accomplishments

My two-year term as president of the IEEE Signal Processing Society (SPS) has ended. My official duties have included representation of the Society to the outside world and oversight of all activities of the Society. Performing these duties in our complex organization has been challenging but also exhilarating. The support network of outstanding volunteers and staff in our Society has been the key to our accomplishments over the past two years. I credit these accomplishments to their support, wisdom, and initiative. Here are some highlights of the Society’s accomplishments over the past two years.

The Society has rolled out several new publications. Our publications continue to be the most highly cited in the field of signal processing. In 2006 the first issue of IEEE Transactions on Information Forensics and Security (TIFS) appeared. Later that year saw the first issue of the IEEE Journal on Selected Topics in Signal Processing (JSTSP). These publications are going strong and bring the total number of SPS publications to seven. The Society now offers the second largest number of publications of any IEEE Society. Furthermore, in 2007 the Society introduced a new electronic newsletter, called Inside Signal Processing. This newsletter is published electronically under the auspices of IEEE Signal Processing Magazine and is the first open-access publication that the Society has offered to the community. Finally, as of 2008 the longstanding IEEE Signal Processing Letters becomes electronic only and is accessible to all Society members as a new member benefit.

Thanks go to VP Publications Ray Liu and his Publications Board.

The Society has maintained a vigorous set of meetings and conferences. Our technical meetings remain the primary international venue for signal processing. In 2006 the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) was held in Toulouse, France, and in 2007 the International Conference on Image Processing (ICIP) was held in Atlanta. ICASSP 2007 was held in Hawaii, and ICIP 2007 was held in San Antonio. We have also added value to these conferences. For example, at ICIP 2007 we introduced a student reception for student registrants to mingle with pioneers, leaders, and dignitaries in signal processing. These conferences have been very successful and continue to grow. The SPS now has the second largest number of conferences, symposia, and workshops of any IEEE Society. Thanks go to VP Conferences Athina Petropolu and her Conference Board.

The Society has expanded its awards and recognitions. Awards are the primary way that the Society recognizes professional accomplishment, and as our field grows so must our awards. The number of Best Paper Awards and the number of Distinguished Lecturer Awards were both increased significantly. There is now a new award for best column in IEEE Signal Processing Magazine, proposed by the Publications Board. Last year the Society had a record number of successful IEEE Fellow nominations as compared to our past success rates. Thanks go to the VP Membership and Awards Mos Kaveh, his Awards Board, and to the nominators of those receiving awards and recognitions.

The SPS launched an ambitious project in open access and open source education. As described in my

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November “President’s Message,” the IEEE-SPS/Connexions lensing project is a partnership between Connexions, one of the largest repositories of open access open source electronic education materials, and SPS, which has provided the most highly reputable venue for the publication and dissemination of research in the field of signal processing. Thanks go to Executive Director Mercy Kowalczyk and the ad hoc Lensing Oversight Committee consisting of Don Johnson, Doug Jones, Mos Kaveh, and Doug Williams.

It has been a pleasure to work with the SPS Board of Governors to insure that the organization runs smoothly and that we capitalize on strategic opportunities. The hard work of the five vice presidents (Acero, Djuric, Kaveh, Liu, Petropolu), the president elect (Moura), and the executive director (Kowalczyk) as Executive Committee made my job easier. This sub-committee of the Board of Governors proved to be an invaluable forum for sounding out new ideas and problem solving. I have also been privileged to have had the support of a first-rate staff in the SPS office. The staff’s extensive knowledge and experience enabled all of the new activities and initiatives that were launched during my term.

Special thanks go to President-Elect José Moura for his major efforts in strategic planning and in rolling out the Society Technical Committee review process. His attention to detail and process kept us all on track. Our new VP Technical Directions Alex Acero started in 2006, and I thank him for his enthusiastic efforts and ideas. I commend VP Finance Petar Djuric for his efforts in keeping the Society solvent—our financial health is better than ever. I am grateful to the Past-Past President Fred Mintzer for preparing me for my presidency. My apprenticeship to him when I was president-elect was invaluable. Last, but certainly not least, I express my gratitude to the dozens of volunteers in the Society with whom I have closely interacted over the past 15 years. These interactions formed a deep well of experience from which I drew regularly in my tenure as president.

As Voltaire said, “Every man is guilty of all the good he did not do.” [Voltaire (nom de plume of François Marie Arouet) was a French author and philosopher (1694–1778)]. As your president I have tried my best to do good for the Society whenever I saw an opportunity. I am confident that our new President José Moura and President-Elect Mos Kaveh will be expert pilots at the wheel steering us towards new opportunities.

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column highlights a contribution by Davidson and Lutz discussing neuroplasticity, which studies brain changes in response to various forms of meditation experiences.

Over the last decade, digital brain atlases have emerged as a major discipline, developing anatomical maps for brain understanding and neurological information fusion. In the column “Life Sciences,” Gee introduces the technology and challenges of constructing digital brain atlases and some of their most promising applications in biomedicine.

Robot designers have long attempted to imitate the agility and speed of abilities possessed by biological systems such as insects. Delcomyn’s article describes the unique biological features and performance characteristics associated with the sense organs in the legs of insects, shedding lights on possible ways of improving the performance of walking robots. Bradski and Kaehler review the important signal processing methods underlying the robot vision system and discuss how such techniques are used in the famous Stanley robot racing car, which ran the 132-mile race completely autonomously and won the 2005 DARPA Grand Challenge race.

In the spirit of promoting research reproducibility, we are pleased to include, in the column “Best of the Web,” a survey by Papanikolopoulos about valuable resources for robotics signal processing evaluation.

We invite you delve into the exciting content of this issue! Let us know how you like it.