

About This Issue

It's hard to believe we've reached the end of another year. For *IEEE Control Systems Magazine (CSM)*, it has indeed been a special year. We began the year with a special section in the February issue on innovations in undergraduate control education, the second of a two-part project. The April issue included features covering topics such as anesthesia and electric wheelchairs, followed in June by a special section on the history of analog computing. The August issue on low-tech motion control brought many positive comments from readers who appreciated the connections to everyday life. The October issue was another special issue, in fact, the first of a two-part project on controlled fusion in tokamaks.

In the present issue, we have a diverse collection of features. The article by Wiener and Cebuhar shows how hysteresis in a pneumatic actuator can be overcome by careful modeling and control design. Next, Castillo, Lozano, and Dzul use a nested-saturation control law to stabilize a laboratory-scale quad-rotor helicopter. The article by Hellerstein, Diao, Parekh, and Tilbury applies control techniques to computer systems, an area of increasing interest and activity. Léchevin, Rabbath, and Dufour use controller discretization techniques to improve the speed of digital simulation of power electronics. Finally, the article by Renk, Collins, Rizzo, Lee, and Bernstein uses a robot arm and optimization techniques to calibrate a triaxial accelerometer. Taken together, these articles encompass both traditional and unconventional uses of control technology.

One year ago, the December issue of *CSM* was devoted to the 50th anniversary of the IEEE Control Systems Society (CSS). That issue provided a retrospective of the first 24 volumes of *CSM*, through a gallery of covers that shows the scope and evolution of this publication. The current issue of *CSM* also marks a special milestone, namely, completion of the 25th volume of this magazine. Starting with the 26th volume in February 2006, we will begin a "25 Years Ago" column, which will provide a glimpse of how far we've come in a quarter century.

The "25 Years Ago" column is part of a major redesign of *CSM*, marking the beginning of the next quarter century of this publication. *CSM* gave me free rein to work with Janet Dudar and Geri Krolin-Taylor in "making over" the look and feel of this magazine. I hope you will be pleasantly surprised by some of the coming changes. One change is a regular venue for your letters. Please feel free to send me your thoughts, comments, and suggestions on any aspect of this publication. I want to hear from you!

Besides your letters, the corresponding editors are constantly seeking short articles on applications of control technology. If you are working on some aspect of control, then I invite you to contribute an article on recent developments and innovations.

The redesigned *CSM* will provide the perfect venue for the exciting articles we have lined up for 2006. The February issue will be devoted to PID control, the bread and butter of control engineers. April will bring the second part of control of tokamak plasmas, and there are special issues in the works on topics ranging from process control to motorcycles.

Now is the time to renew your membership to the CSS. Besides giving you discounts at CSS conferences, your membership keeps the CSS strong and reflects your belief in the value and importance of control technology.

I would like to use this opportunity to thank all of the members of the *IEEE CSM* Editorial Board. The associate and corresponding editors are the most valuable asset of this publication, handling reviews, soliciting articles, and facilitating new projects. Finally, I wish to thank the IEEE staff for their untiring support and infinite patience. Geri Krolin-Taylor somehow manages to take all of the raw material for each issue and turn it into a polished publication, while Janet Dudar's design magic is visible from cover to cover.

Happy new year to all, and see you in Seville!

—DSB



Current Editor-in-Chief Dennis Bernstein congratulates IEEE CSM's founding Editor-in-Chief Mo Jamshidi on the 25th anniversary of the Magazine. The EICs met at the University of New Mexico in Albuquerque in August 2005.