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Subject: Summary of activities of the Technical Committee (TC) on Industrial Process Control (IPC)

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The applications areas covered by the TC IPC include microelectronic, materials, pharmaceutical, chemical, and electrochemical processes. Many emerging control applications areas, such as molecular manufacturing, microchemical systems, and systems biology, are included in this TC. Most processes of interest are highly nonlinear and spatially distributed with significant model uncertainties and constraints on actuators, states, and outputs. The main role of this TC is in the organization and programming for meetings, in concert with other organizations such as IFAC.

Membership in the TC IPC is open to any member of the IEEE Control Systems Society, and *CSS members interested in organizing sessions, symposia, and meetings are strongly encouraged to email your interest to braatz@uiuc.edu.*

(1) Members of Steering Committee (SC)

Richard D. Braatz (Chair), Frank Allgöwer, B. Wayne Bequette, Francis J. Doyle III, Martha Gallivan, Juergen Hahn, Michael A. Henson, Morten Hovd, Mayuresh V. Kothare, Jay H. Lee, Yahya Nazer, Babatunde A. Ogunnaike, Srinivas Palanki, Robert S. Parker, Michel Perrier, and Hector D. Puyosa.

(2) Main Organizational Activities

As the members of the TC IPC steering committee (SC) are very active, only the main activities are summarized here. The most important recent past and upcoming meetings organized or co-organized by members of the TC IPC are:

- *IEEE International Conference on Control Applications* (<http://www.elet.polimi.it/conferences/cca06/>, Munich, Germany, October 4-6, 2006): Allgöwer and Ogunnaike were on the International Program Committee.
- *Control of Particulate Processes VII* (<http://www.engconfintl.org/6avbody.html>, Harrison Hot Springs, British Columbia, Canada, October 29-November 2, 2006): Braatz, Doyle, Perrier, and Ogunnaike were on the International Advisory Board. The goal of this meeting is to review state-of-the-art developments in particulate process measurement, control, and modeling.
- *17th European Symposium on Computer Aided Process Engineering (ESCAPE 17)*, (<http://www.escape17.upb.ro/>, Bucharest, Romania, May 27-30, 2007): Braatz is on the International Scientific Committee. The purpose of this meeting is to bring together the international community of researchers and practitioners who are interested in computing-based methods in process engineering.
- *IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS 2007)*, (<http://www.dycops2007.org/>, Cancun, Mexico, June 6-8, 2007): Hovd, Lee, and Ogunnaike are on the International Program Committee. The focus of this meeting is on advances in methods for control and modeling for all types of chemical processes
- *American Control Conference (ACC)*, (<http://www.a2c2.org/conferences/acc2007/>, New York, July 11-13, 2007): Many members of the SC were involved with the review process. Braatz is the Vice Chair for Invited Sessions and a Director on the American Automatic Control Council. Allgöwer, Braatz, Gallivan, and Henson are on the Program Committee.
- *American Control Conference (ACC)*, (<http://www.a2c2.org/conferences/acc2008/>, Seattle, June 11-13, 2008): Kothare will be a Society Review Chair and Braatz is on the Program Committee. Many members of the SC will be heavily engaged in the review process.
- *IFAC World Congress (IFAC)*, (<http://www.ifac2008.org/>, Seoul, Korea, July 6-11, 2008): Allgöwer and Doyle are on the International Program Committee with Allgöwer serving as a Technical Editor and Doyle as a Technical Associate Editor. Doyle and Hahn are co-organizers of the Chemical Process Control track.

- *IFAC Symposium on Advanced Control of Chemical Processes* (ADCHEM, Istanbul, Turkey, July 12-15, 2009): Many members of the SC are on the International Program Committee.
- *American Control Conference* (ACC, 2010): Braatz will be the program chair and Allgöwer will be the Vice Chair for Invited Sessions.

Many members of the IPC (Allgöwer, Braatz, Doyle, Henson, Hovd, Lee, Parker, Perrier) are members of IFAC TCs including the Mining, Minerals and Metals Processing TC, the Modelling and Control of Biomedical Systems TC, the Biosystems and Bioprocesses TC, the Non-Linear Control Systems TC which Allgöwer chairs, and the Chemical Process Control TC which Doyle serves as Vice-Chair.

(3) TC IPC Web Page

The TC IPC website is a resource for engineers interested in the area of Industrial Process Control, and includes information on symposia and conferences in the area of Industrial Process Control; educational material including course syllabi, class notes, textbook lists, and software; and links to the websites of organizations and journals in the Industrial Process Control area (go to the TC IPC web link at the IEEE CSS website, <http://www.ieeecss.org/TAB/Technical/industrial>). All TC IPC meetings are announced at least 1 month in advance in the "Newsletter" section of the TC IPC web page (these meetings are typically associated with the ACC or CDC meetings). The next meeting of the TC IPC will be during lunch on Thursday, July 12, during the 2007 American Control Conference in New York. We will meet at noon in the lobby of the Marriott Marquis Hotel at Times Square.

(4) Summary of Editorial Activities

- Bequette was the editor of two special issues on Process Control for the *IEEE Control Systems Magazine* (August and December, 2006).
- Doyle is Editor-in-Chief of *IEEE Transactions on Control Systems Technology*, whose associate editors include Palanki.
- Kothare is an associate editor of *IEEE Transactions on Automatic Control*, for which Braatz will become an associate editor in 2008.
- Allgöwer is the Editor for Process and Computer Control of *Automatica*, where Braatz, Henson, and Kothare serve as Associate Editors.
- Doyle has served as the Reviews Editor for the IFAC-affiliated *Journal of Process Control* for several years, whose Associate Editors include Allgöwer, Braatz, Henson, and Perrier.
- Braatz was the editor of the 2007 Special Issue on Chemical Process Control for the *International Journal of Robust and Nonlinear Control*, to which Allgöwer and Doyle contributed papers.
- Bequette is a founding member of the editorial board of the *Journal of Diabetes Science and Technology* whose coverage includes insulin control, and he is co-editing two special issues to appear in 2007.