



## Call for Papers

## Special issue on “Applications of advanced process control technology on industrial systems”

Dear Colleagues

We would like to solicit contributions to a special issue in *Control Engineering Practice* (An IFAC Journal) on “Applications of Advanced Process Control Technology on Industrial Systems”.

Despite growing commercial applications of APC technology on various industrial processes over the past three decades, there are still many unresolved challenges at every stage of application design and deployment (test signal design, systems identification, closed-loop stability, infeasibility handling, performance monitoring and diagnosis, etc.). APC practice has partially become ‘an art’ because of so many unpublished/unreported/scantily referenced ‘best practices’.

At the same time, the number of new processes that are being automated and optimized every year is growing exponentially and so are the challenges associated with successful APC application development and deployment. For example, control and optimization of the main fractionator or downstream gas concentration unit in a Coker plant is plagued by huge, persistent cyclic disturbances arising from various events in coking drums. In a dry wall production plant, variations in belt conveyor speed result in a variable dead-time, variable time-constant system for the control of degree of crystallization and/or degree of drying. In a liquid–liquid extractor unit huge energy and material recycles pose a stiff control problem with a dense cause–effect matrix. This list can grow very quickly.

This special issue is aimed at bringing forward various challenges that are encountered in deployment of large scale industrial APC applications and how they have been addressed, what the new challenges are and possible solutions. This opens up a new avenue for academicians, researchers and industrial practitioners to focus on immediately applicable control engineering research towards better solutions. The special issue is expected to serve as a good repository for best practices in APC design and deployment on industrial systems.

The due date for submissions is set as August 15, 2012. Authors are encouraged to notify one of the Guest Editors indicating their intention to submit a paper by July 15, 2012. Submissions will be peer reviewed and authors will be notified of the final decisions no later than April 1, 2013. Expected publication of the special issue is June 2013.

Papers should contain high-quality original contributions and be prepared in accordance with the CEP standards. Papers must be submitted using EES system (<http://ees.elsevier.com/conengprac/default.asp>) under the group of “Special Issue Advanced Process Control”. Further instructions to authors can be found at [http://www.elsevier.com/wps/find/journaldescription.cws\\_home/123/authorinstructions](http://www.elsevier.com/wps/find/journaldescription.cws_home/123/authorinstructions).

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