

**17TH INTERNATIONAL CONFERENCE ON SYSTEM THEORY, CONTROL
AND COMPUTING
JOINT CONFERENCE SINTES 17, SACCS 13, SIMSIS 17**

**11 - 13 October 2013,
Sinaia, ROMANIA**

**CALL FOR PAPERS FOR INVITED SESSION ON
*MODELLING, ESTIMATION AND CONTROL OF
BIOTECHNOLOGICAL PROCESSES***

Organizers:

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Topics:

Biotechnological processes are widespread in a range of industries such as food processing, pharmaceuticals and environmental management. The development of advanced control strategies for these processes is hampered by major difficulties. These processes are strongly nonlinear and furthermore the process parameters are highly uncertain. Another difficulty lies in the absence, in most cases, of cheap and reliable instrumentation. The bioprocess modelling is a difficult task; however, using the mass balance of the components inside the process and obeying some modelling rules, a dynamical state-space model can be obtained. Finding an appropriate and reliable dynamical state-space model, as well as their right set of parameter values, is a time-consuming task due to the above described difficulties. In recent times, a growing number of works have considered the use of advanced techniques for the modelling, estimation and control of biotechnological processes, in an attempt to provide alternative and flexible strategies to implement these tasks.

This special session proposes to bring together researchers, scientists and engineers from academia and industry, so as to discuss ideas and results related to the use of advanced techniques in the field of modelling, estimation and control of bioprocesses. This includes key results in (but not limited to): bioprocess modelling techniques, off-line identification, on-line parameter estimation (interval observers, sliding mode observers), predictive control, adaptive control, intelligent control and hybrid approaches. Theoretical and practical studies are equally encouraged.

Those interested please send a title + a short abstract (200 words) before May 10th, 2013 to one of the session organizers. Notification of acceptance will be communicated by July 15th, 2013, and the review procedure will be similar to the regular papers.