

3rd International Conference on Control and Fault-Tolerant Systems, SysTol'16

September 7-9, 2016 - Barcelona, Catalonia, Spain

<http://systol16.cs2ac.upc.edu>



SysTOL
2016



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Important dates

Submission of draft papers:

March 14th, 2016

Notification of acceptance:

June 1st, 2016

Final version due:

July 4th, 2016

Financial Sponsor

Research Center for Supervision, Safety and Automatic Control

Technical Co-Sponsor

IEEE Control Systems Society
IEEE Reliability Society
Research Center for Automatic Control of Nancy
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Scope of SysTol'16

Faults/failures in technical systems may have many undesired consequences as damage to technical parts of plants, endangering of human life or pollution of the environment. Equipment failures may also have profound negative impact on production costs and product quality. The development of fault diagnosis methods allowing early detection of faults/failures is crucial in order to protect complex manufacturing machineries, to increase human life safety and to support decision making on emergency actions and repairs. Moreover, in highly automated industrial systems where maintenance or repair cannot be carried-out immediately, it is crucial to employ fault-tolerant control systems capable of ensuring acceptable performance even in the presence of faults. The conference will bring together academics, engineers and practitioners active in the fields of fault diagnosis, fault tolerant control and their application in process monitoring and maintenance. The conference main aims are:

- to showcase current research results and recent developments of intelligent techniques;
- to present practical applications and emphasize open problems;
- to provide a forum for industry to signal its needs and priorities.

The two previous editions of the International Conference on Control and Fault-Tolerant Systems (Systol'10 and Systol'13) were a success and demonstrated the demand for establishing a permanent scientific forum in the general area of system monitoring, fault diagnosis and fault-tolerant control. The third conference on Control and Fault-Tolerant Systems (Systol'16), through its technical program, will provide a unique opportunity for the academic and industrial community to formulate new challenges, share solutions and discuss future research directions. Presentations of theoretical results accompanied by practice related experiments are encouraged. Topics of SysTol'16 includes (but are not limited to):

Research areas

Statistical and signal processing
Fault detection and isolation
Fault tolerant control / fault recovery
Networked control system
Health monitoring
Quality monitoring
Decision making
Discrete event and hybrid systems
Supervisory control
Fault-forecasting methods
Design for reliability and safety
Model-based methods
Data driven methods
Soft computing
Maintenance policies
Risk analysis

Industrial applications - Case studies

Transportation systems
Automobile
Autonomous vehicles
Road infrastructure
Power plants / energy transport
Chemical processes
Aeronautics / aerospace
Civil engineering
Building supervision
Mining and mineral
Metal processing
Water treatment
Communication networks
Mechatronic and robotics
Manufacturing systems
Medical device

Paper submission/proceedings

Papers must be submitted electronically via web upload only. Full papers should be submitted in standard IEEE A4 paper and double-column format for conferences. Six pages are allowed for each paper. Submitted papers will undergo a peer review process, co-ordinated by the Program Chairs and the IPC. Please visit the conference website for further information. Proceedings of the conference will be produced in compliance with IEEE Xplore's PDF requirements for immediate inclusion in the IEEE Electronic Library on IEEE Xplore.

Invited Sessions

Researchers who would like to organise one or more Invited Sessions on topics falling within the scope of the conference are invited to submit a proposal for consideration. This should include: the title of the session, a copy of the session abstract as well as individual paper abstracts from each of the proposed participants. Through the submission website, please submit an invited session proposal and complete the fields in this section. An invited session identification code will be communicated to the corresponding proposer and should be used by the prospective contributors.

