

# 5th International Conference on Control and Fault-Tolerant Systems, SysTol'21

September 29<sup>th</sup>, 30<sup>th</sup> and October 1<sup>st</sup>, 2021 - Saint-Raphaël, France

<http://www.systol.org/systol21>



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## Important dates

Submission of draft papers:

May 3rd, 2021

Notification of acceptance:

June 7th, 2021

Final version due:

July 12th, 2021

## Financial Sponsor

Centre de Recherche en Automatique de Nancy (CRAN), France

Université de Lorraine (UL), France

## Technical Co-Sponsors

IEEE Control Systems Society

It is our pleasure to welcome you in Saint-Raphaël on the French Riviera from September 29<sup>th</sup> to October 1<sup>st</sup> for the fifth edition of SysTol!

## Special focus on Cybersecurity

In addition to emerging fault-tolerant control systems generally addressed in the successive editions of SysTol, Cybersecurity will play a special role in the fifth edition of SysTol Conference. For decades industrial control systems have been the target of by hackers who use weaknesses in security systems to launch attacks affecting the physical system. These cyber attacks can cause significant damage to the target system, its environment and product quality or production equipment. It then becomes vital to develop detection mechanisms by implementing control filters close to the controlled process. In this context, intrusion detection systems guarantee that the functionality of the system is respected despite attacks, whether in degraded mode.

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 in intelligent techniques,
- to present practical applications and emphasize open issues,
- to provide a forum for industry to communicate its needs and priorities.

The four previous editions of the International Conference on Control and Fault-Tolerant Systems (SysTol'10, '13, '16, '19) were successful and demonstrated the needs to establish a permanent scientific forum in the general field of system monitoring, fault diagnosis and fault-tolerant control. The conference on Control and Fault-Tolerant Systems (SysTol'21), 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. Topics of SysTol'21 includes (but are not limited to):

### Research areas

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  
Maintenance policies  
Risk analysis

### Industrial applications - Case studies

Cybersecurity  
Transportation systems  
Automobile  
Autonomous vehicles  
Power plants / energy transport  
Chemical processes  
Aeronautics / aerospace  
Civil engineering  
Building supervision  
Mining and mineral and metal processing  
Water treatment  
Communication networks  
Mechatronic and robotic  
Medical device

## Paper submission/proceedings

Papers must be submitted electronically by web upload only. Full papers should be submitted in standard IEEE A4 paper and in double-column format. Six pages are allowed for each paper. Submitted papers will undergo a peer review process, coordinated by the Program Chairs and the IPC. Please visit the conference website for more information. Conference 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 wish to organize one or more Invited Sessions on topics relevant to 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 abstract of the session and summaries of individual papers abstracts of each of the proposed participants. Through the submission website, please submit a proposal for session and complete the dedicated fields. An invited session identification code will be provided to the corresponding proposer and should be used by the potential contributors.