



Registration Chair B. Shafai (back left), General Cochair M. Sznaier (back right), and a group of hard-working volunteers.

opening ceremony was attended by representatives from the Ministry of Science of Technology of Argentina (a conference cosponsor), the Argentin-

ian National Research Council, and by seven past and present CSS presidents.

Remarkably, out of 278 attendees, 102 (37%) were students and 67 (24%)

were non-IEEE members, reflecting the success of the MSC in attracting “new blood” to the Society’s events.

### HIGHLIGHTS OF THE SOCIAL PROGRAM

The social program included a welcome reception at the hotel and a banquet held at the historic Palacio San Miguel. The banquet had 200 attendees who enjoyed the local cuisine, an excellent Malbec wine, and a tango orchestra and dance show.

**R. Sánchez-Peña**  
**M. Sznaier**

*MSC2016 General Cochairs*

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## The Third International Conference on Control and Fault-Tolerant Systems

**T**he Third International Conference on Control and Fault-Tolerant Systems (SysTol2016) was held September 6–9, 2016 at the Universitat Politècnica de Catalunya (UPC) in Barcelona, Spain. The conference was organized by the Research Center “Monitoring, Safety and Automatic Control” (CS<sup>2</sup>AC-UPC) with the support of the Research Center for Automatic Control of Nancy.

Following the success and acceptance by the international community of the previous editions (SysTol2010 and SysTol2013), the SysTol conferences are now organized every three years and designed to provide a scientific forum for discussions on system monitoring, fault detection and diagnosis, and fault-tolerant control. The design of the safe and reliable operation of technical systems is important for the protection of the environment

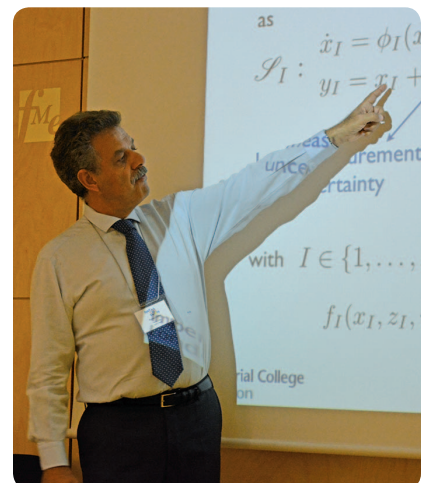
and human life and health and to support decision making and emergency actions and repairs. The design of control systems to ensure acceptable performance in the presence of faults is also important, especially in highly automated industrial systems where maintenance or repair cannot be carried out immediately.

The conference general chairs were Prof. Vicenç Puig (Universitat Politècnica de Catalunya, Spain) and Prof. Christophe Aubrun (University of Lorraine, France). Prof. Dominique Sauter (University of Lorraine, France) and Prof. Horst Schulte (HTW Berlin, Germany) did an outstanding job as the program chairs during the review process and prepared an exciting conference program.

Barcelona was chosen as the location of this event because it is easily accessed, the city has good weather, and it is attractive to tourists. The site of the conference was the Faculty of Mathematics of UPC at the Barcelona University Zone.

### TECHNICAL PROGRAM AND PLENARY TALKS

The conference program committee had the very challenging task of choosing between many high-quality submissions. Each paper was peer reviewed by at least two independent referees; see Table 1.



Prof. Thomas Parisini during the plenary session.



SysTol16 attendees enjoying the gala dinner.

**TABLE 1** Conference statistics.

Submitted manuscripts	189
Accepted papers	135
Invited sessions	8
Plenary and semiplenary talks	6
Acceptation rate	71%
Number of attendees	143

The first two days opened with plenary presentations:

- » “A Distributed Approach for Plug and Play Monitoring and Fault-tolerant Control of Large-scale Systems,” Prof. Thomas Parisini, Imperial College London, United Kingdom
- » “From Fault Diagnosis to Reconfigurable Control: A Unified Concept,” Prof. Jan Lunze, Ruhr-Universität Bochum, Germany.

The plenary talks were complemented by four semiplenary talks:

- » “Model-Based Fault Diagnosis for Wind Turbines—Can It Work in Practice?” Prof. Michel Kinnert, Université Libre de Bruxelles, Belgium
- » “Analysis of Model-Free Approaches for Fault-Tolerance: Application to a Quadrotor UAV,” Prof. Hassan Noura, United Arab Emirates University, United Arab Emirates
- » “Kalman Filtering and Zonotopic State Bounding for Robust Fault Detection (Best Paper in IFAC Safeprocess 2015),” Prof. Christophe Combastel, University of Bordeaux, France
- » “FDI Future Needs and Challenges for Upcoming Civil Air-

craft Generation: An Industrial Vision,” Dr. Philippe Goupil, AIRBUS, Toulouse, France.

The conference lasted three days. The program included 24 regular and eight invited sessions in three parallel tracks, with subjects including

- » fault detection and diagnosis in linear and nonlinear systems
- » data-driven, statistical, and signal-processing methods
- » fault diagnosis for automotive systems, aircraft and spacecraft, and autonomous vehicles
- » design for reliability and safety, health monitoring, maintenance policies, and decision making
- » fault-tolerant control
- » sustainable control of offshore wind turbines and monitoring, diagnosis, and fault-tolerant control for wind-energy conversion systems.

These talks gave the participants an opportunity to share in the knowledge and experience of world-renowned experts in many exciting topics such as fault-tolerant and vehicle dynamic control, linear parameter-varying and Takagi–Sugeno methods for fault-tolerant vehicle dynamic control, fault-tolerant control with applications

to autonomous unmanned systems, dynamic reliability from probabilistic safety analysis to fault-tolerant control, robust control systems for modern power electronics and energy systems, and fault detection and mitigation in the process industry.

The program-at-a-glance is accessible via the conference website (<http://systol16.cs2ac.upc.edu/>). The high quality of the program was only possible thanks to the efforts of the program chairs, the members of the international program committees, and the organization staff.

As in previous editions, a special section is being prepared for publication in *International Journal of Applied Mathematics and Computer Science* (<http://www.amcs.uz.zgora.pl>) based on selected papers presented at the conference. The SysTol conferences will be continued, and the organization of the next edition will be announced soon.

## SPONSORS

The conference was sponsored by CS<sup>2</sup>AC-UPC and UPC. The IEEE Control Systems Society and the IEEE Reliability Society were technical cosponsors. The conference was also cosponsored by the Spanish Section of IFAC (CEA-IFAC).

**Vicenç Puig**  
**Christophe Aubrun**  
*General Chairs*

**Dominique Sauter**  
**Horst Schulte**  
*Program Chairs*

