

# Proposal for an open invited track on "History of Automatic Control in Aerospace engineering"

**Organized by:**

D. Alazard (ISAE-SUAPERO), A. Nebylov (SUAI)

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## Description

Toulouse, the Aerospace European city, will welcome the next IFAC World Congress 2017. This event will also celebrate the 60'th birthday of IFAC. 60 years ago (1957), the first artificial satellite of the earth, Sputnik, was launched. 100 year ago (1917), the first flight of an aircraft equipped with a gyro-based autopilot (see Fig. 1) was certainly one of the first success of Automatic Control in Aeronautical engineering. Indisputably, IFAC WC 2017 is the good event to collect international contributions in an historical open invited track dedicated to the challenges won in Aerospace engineering, thanks to Automatic control.

The scope of this open invited track is to capitalize and exchange the feedback gained from the past major developments and major programs dedicated to control systems in the field of Aeronautical and Astronautical engineering. Contributions can focus on the evolution of methods and algorithms for GNC (Guidance, Navigation and Control), FDIR (Fault Detection Identification and Reconfiguration), FMS (Flight Management Systems), ... as well as instrumentation, actuators, on-board computer for aerospace vehicles (aircraft, rotorcraft, launchers, satellites, constellations,...). The contributions aiming to propose the new challenges for the next decades based on the experience gained from the past will be also very well appreciated.

Each contribution can take the form of:

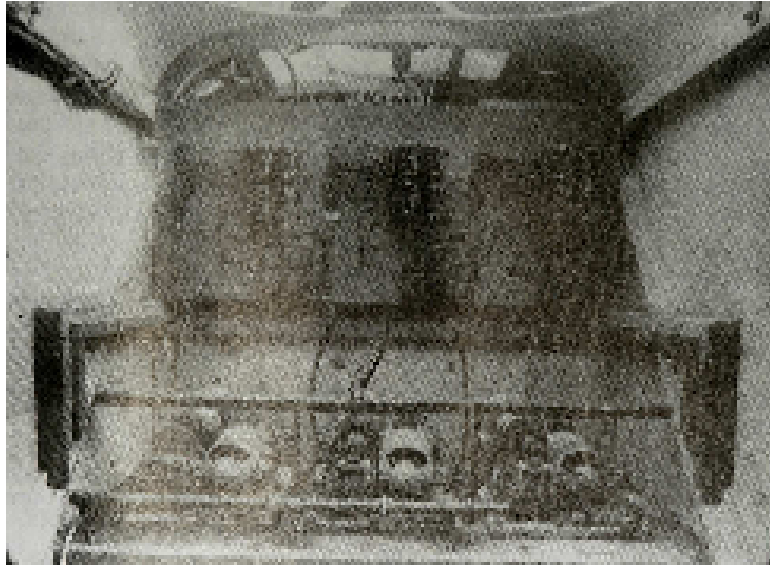


Figure 1: 1917: HEWITT-SPERRY Automatic Airplane .

- a regular paper (submitted to the review process and included in the congress proceedings if accepted),
- an extended abstract (reviewed by the program committee, included in the congress preprints but not in the congress proceedings).

## References

- [1] D. McRuer and D. Graham *A Flight Control Century: Triumphs of the Systems Approach*. Journal of Guidance, Control and Dynamics, Vol. 27, No. 2, pp. 161-173, 2003.
- [2] V. P. Legostaev and E. A. Mikrin *History of spacecraft control systems*. Automation and Remote Control, Vol. 74, No. 3, pp. 331-347, 2013