Research Chair on Drone Systems

Powered by

The ENAC – Groupe ADP – Sopra Steria research Chair on Drone Systems was launched in 2019. Building on the work produced by the first version of the Chair - created in 2015 - it aims to promote research and education by benefitting from ENAC's expertise in drones and Air Traffic Management. It is the first European research chair to address the subject of drone integration into the airspace.

The work of the Chair's researchers, in collaboration with the ENAC research teams, facilitates the development of standards, regulations and technologies for the safe use of drone systems.

The Chair contributes to the integration of drones into the airspace by covering the following topics :

- **Fault detection, diagnosis and management**
- **Airport operations**
- **U-space**

Publications

- **Integration of UAS in Terminal Control Area**, *Digital Avionics Systems Conference (DASC) Sacramento, United States 2016 IEEE/AIAA 35th*, C.Allignol, N. Barnier, N. Durans, G. Manfredi, E. Blond
- **Flexible open architecture for UASs integration into the airspace: Paparazzi autopilot system**, *Digital Avionics Systems Conference (DASC) Sacramento, United States 2016 IEEE/AIAA 35th*, E. Baskaya, G. Manfredi, M. Bronz, D. Delahaye
- **An introduction to ACAS Xu and the challenges ahead**, *Digital Avionics Systems Conference (DASC) Sacramento, United States 2016 IEEE/AIAA 35th*, G. Manfredi, Y. Jestin
- **Fault detection & diagnosis for small UAVs via machine learning**, *Digital Avionics Systems Conference (DASC) Sacramento, United States 2017, IEEE/AIAA 36th*, E. Baskaya, M. Bronz, D. Delahaye
- **Assessing the Robustness of a UAS Detect & Avoid Algorithm**, *12th USA/Europe Air Traffic Management Research and Development Seminar, Seattle, United States - 2017*, C. Allignol, N. Barnier, N. Durand, G. Manfredi, E. Blond
- **Unmanned Aerial System Operations for Retail**, *ICAS 2018 : The Fourteenth International Conference on Autonomic and Autonomous Systems*, G. Manfredi, E. Baskaya, J. Sharples, Y. Jestin

More information: http://rpaschair.enac.fr

Applications and projects

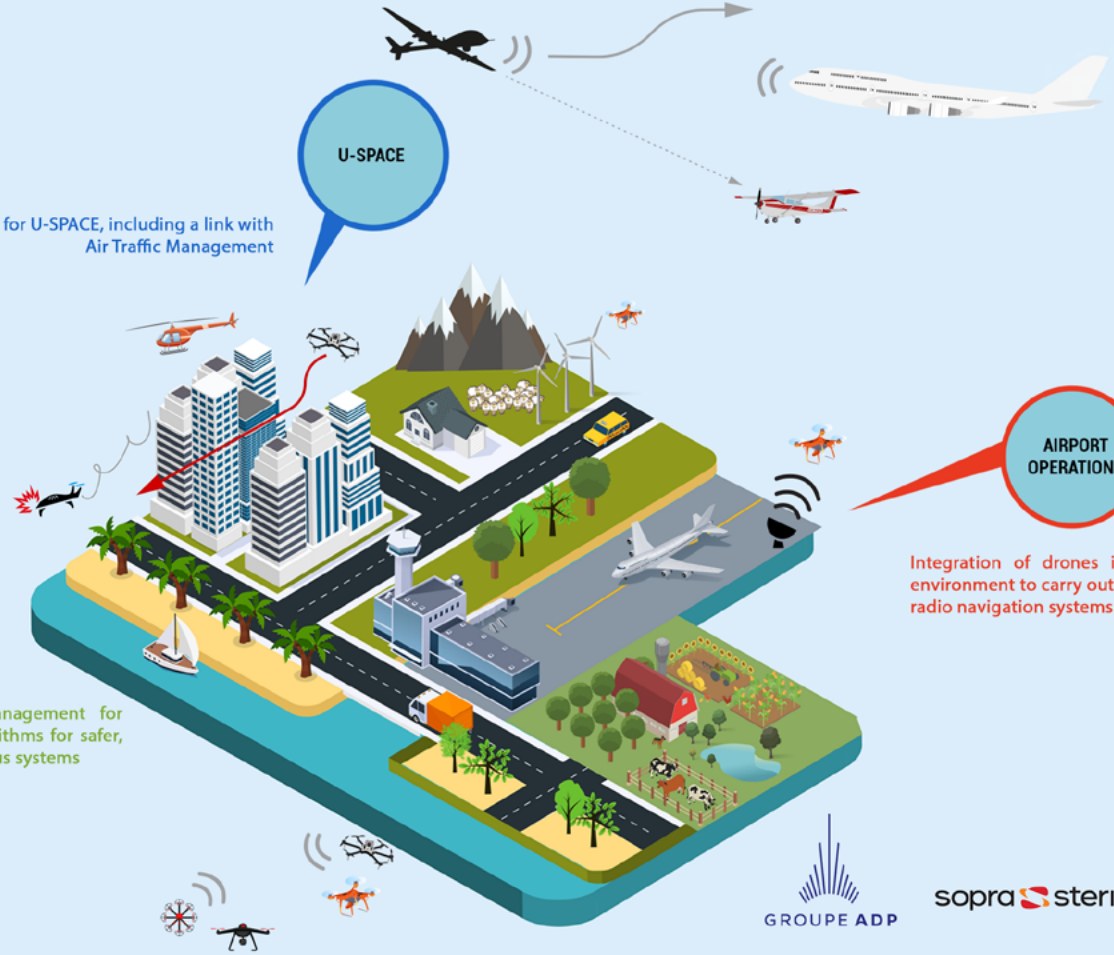
- **SESAR2020 IR – pj10 pj11**, contribution, with the DGAC, to the concepts of operation and the validation of D&A algorithms and to the integration of drones in IFR
- **SESAR2020 ERC–CLASS**, cooperative and non-cooperative surveillance, data fusion, conflict avoidance, links with operators to maintain situational awareness
- **SESAR2020 VLD-USIS**, contribution and validation of U1-U3 services through live flights and simulations
- Contribution to **EUROCAE WG 105 and 75**, invitation to represent France at **JARUS**
- Contribution to the writing and delivery of **educational courses** at ENAC

Contact
Yannick Jestin
Chairman
Tél : +33(0)5 62 25 96 56
e-mail : yannick.jestin@enac.fr

ENAC

U-SPACE

Building blocks for U-SPACE, including a link with Air Traffic Management



INTELLIGENT DRONES

Fault detection, diagnosis and management for drones using machine learning algorithms for safer, more intelligent and more autonomous systems

AIRPORT OPERATIONS

Integration of drones in the airport environment to carry out inspections of radio navigation systems and aircraft

GROUPE ADP

sopra steria

RESEARCH CHAIR ON DRONE SYSTEMS

www.enac.fr