The International Conference on Cognitive Aircraft Systems ICCAS 2022 - June 1-2, 2022, ISAE-SUPAERO, Toulouse, France

Call for abstracts and participation

Following the great success of ICCAS Virtual-2021, we are pleased to organize the ICCAS 2022 conference. The aim is to promote the dissemination and exchange of scientific information on the next generation of civil and military aircraft. It provides an excellent forum for **combining academic research and industrial works** to examine how we can develop intelligent aircraft systems owning more freedom of choice, sensitivity to the context, learning capabilities, and able to interact naturally with the crew or the operators while saving their mental and physical resources. Recent trends in this field address several major aspects such as the online monitoring of the flight performances based on behavioral, physiological, and neurological measurements, the design of more ecological human-machine interfaces providing intuitive information about the flight or mission status to support decision process, and architecture rules that guarantee a high level of operation safety. The conference addresses a wide spectrum of theoretical and practical topics related to neuroergonomics and human factors, artificial intelligence or systems engineering. It is mainly focused on aeronautics but contributions from a wide range of domains such as automotive, robots, drones, or artificial agents are welcome.

Abstract submission is optional: academic, industrial, and students participants can attend the conference with a simple registration.

Topics of interest include, but are not limited to:

- **Neuroergonomics and human factors**
  - Eye tracking, EEG, fNIRS, other measurement methods
  - Brain computer interfaces
  - Mental workload, acute stress, emotion, fatigue
  - Simulation, virtual reality
  - Training, safety analysis

- **Human-Machine Interaction**
  - Multimodal interaction
  - Innovative warning systems, countermeasures
  - Ecological interface design, augmented reality
  - Intelligent assistants, virtual assistants

- o Sensors and adaptive systems

- **Artificial intelligence**
  - o Transparent AI, natural human-machine interaction
  - o Cooperative techniques, mixed-initiative interaction/planning
  - o Human-aware task scheduling
  - o Fault tolerant distributed algorithms
  - o Modeling and simulation

- **Autonomous vehicles and Automation**
  - o Single pilot operations
  - o Remote control of automated vehicles
  - o Unmanned vehicles
  - o Man-machine cooperative techniques
  - o Ethical aspects

Authors are invited to submit an extended abstract up to 5 pages including references and following the conference template. Extended abstracts will be reviewed by the program committee and may be accepted for oral or poster presentation. Online abstracts compilation will be published as open access on OATAO (Open Archive Toulouse Archive Ouverte). Submission guidelines and information are available at https://events.isae-supaero.fr/e/ICCAS-2022

Important dates

- February 28, 2022   Abstracts due
- March 31, 2022   Notification of results
- May 25, 2022   Registration deadline (for presenters & attendees)
- June 1-2, 2022   ICCAS 2022 conference

Conference location

The conference will be held at ISAE-SUPAERO, 10 Avenue Edouard Belin, 31055 Toulouse, France

Registration fees

- Regular fees   100 Euros
- Partner fees   90 Euros
- Student fees   40 Euros

The Conference registration fees include:

- Participation in **all oral sessions**

- Entrance to the exhibition/poster session area
- Access to full **conference abstracts proceedings**
- Refreshment breaks
- Two tickets for the midday meals
- One ticket for the **reception dinner** held in the city center, at the rooftop of the Media library José Canabis, in the Vanel spaces, located right in front of the new "Las Ramblas".

Scientific Program Chair

- Mickaël Causse
- Caroline Chanel

Scientific Committee

- Bruno Berberian, ONERA, France
- Gianluca Borghini, Sapienza University of Rome, Italy
- Anke Brock, ENAC, France
- Gilles Copin, IMT Atlantique, France
- Frédéric Dehais, ISAE-SUPAERO, France
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- Randall Mumaw, San Jose State university, United States of America
- André Tricot, Université de Montpellier, France
- Frédéric Vanderhaegen, Université Polyhtenique Hauts-de-France

Organizing committee

- Corinne Chabanne, ISAE-SUPAERO
- Jean-Louis Gueneau, Dassault Aviation
- Aurore Moskwa, ISAE-SUPAERO
- Agnès Trincal, Fondation ISAE-SUPAERO
- Gilles Tuduri, Dassault Aviation

Partners

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