

**Invitation - Don't miss !**

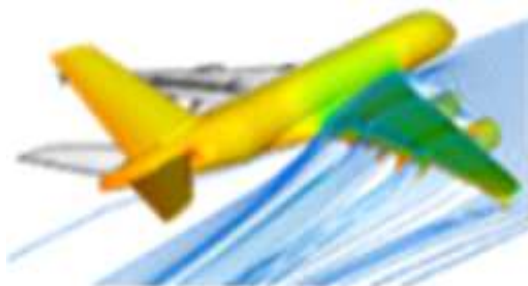
**Sustainable Aviation: how to evolve towards a  
Future Green Aviation meeting Flightpath 2050 Goals**

**June 20, 8:30-11:00**

Venue: **CentraleSupelec** - Eiffel building – **Amphi 1** ,  
3 Rue Joliot-Curie, 91190 Gif-sur-Yvette

*In attendance only – no registration fee*

- 8:30 Welcome by University Paris Saclay
- 8:45 The IFAR ECN week at a glance (ONERA)
- 9:00 Keynote presentation (S bastien Candel)
- 9:45 Panel on sustainable aviation



We are delighted to invite you to attend a conference and a panel organized in the frame of the IFAR Early Career Network week. IFAR stands for International Forum for Aviation Research (<https://ifar.aero/>) and is the network for aviation research establishments worldwide. Based on a voluntary, non-binding basis, IFAR aims to connect research organizations, to enable the information exchange and communication on aviation research activities.

The conference will start with a keynote presentation by **Professor S bastien Candel** (CentraleSupelec) on **“Research to help address present and future challenges facing aviation”**.

A Panel **on sustainable aviation** will follow the keynote presentation, addressing:

1. The ultimate goal of sustainable aviation
2. The next urgent steps to win the race for sustainable aviation
3. Different technologies presented by panelists to help reach the goal of sustainable aviation

Discussion will be an interactive session between fellow panelists and the audience. The panel discussion will be moderated by **Dr Joe Szodruch**, ensuring a dynamic and engaging conversation to inspire and encourage researchers to delve deeper into new techniques for aviation sustainability.

**Moderator: Joachim Szodruch**

**Expected audience:** IFAR young researchers, researchers and graduate students from University, ONERA...

**Distinguished Panelists:**

**Robert A. Pearce**, Administrator Aeronautics, NASA

**Bruno Sainjon**, Chairman and CEO, ONERA – *Vice Chair of IFAR*

**Markus Fischer**, Divisional Board Member Aeronautics, DLR, *founder of IFAR*

**S bastien Candel**, Emeritus professor, CentraleSup lec, University Paris-Saclay



**Sébastien Candel**

**Research to help address present and future challenges facing aviation** Research has always driven progress in aviation. It has permanently helped advance science and knowledge, devise solutions, make breakthroughs, integrate innovations, develop methods and tools, solve problems. This role is even more important at a stage where aviation is facing serious challenges, the main of which being related to propulsion and the replacement of fossil fuels by other sources of energy. Reduction of CO<sub>2</sub> emissions motivated by climate change implies a transition to low carbon energies that is already difficult in terrestrial utilization and production of energy. The difficulty is augmented when decarbonization applies to aviation. It is compounded by the necessity of remaining competitive. After a brief description of the paths that are envisioned to reach the net-zero goal, I will use a few examples of research in combustion for gas turbines, illustrate progress accomplished and current efforts aimed at investigating combustion dynamics of sustainable aviation fuels and of hydrogen flames.

Sebastien Candel is a University professor emeritus at CentraleSupélec, University Paris-Saclay. He obtained an engineering degree from Ecole Centrale Paris, a PhD from the California Institute of Technology and a Science Doctorate from UPMC (University of Paris 6). His research in the field of combustion focused on flame structures, dynamics and control of combustion, modeling and simulation of turbulent flames, transcritical combustion of cryogenic propellants and his fundamental contributions to the field of aeroacoustics have applications in the energy sector and in the aeronautical and space propulsion domain. Among many distinctions, Sébastien Candel received the CNRS silver medal, the Marcel Dassault Grand Prize of the French Academy of sciences, the Pendray aerospace literature award of the AIAA, the silver and gold (Zeldovich) medals both from the Combustion Institute. Sebastien Candel is currently chairing the scientific council of EDF. Member and former president of the French Academy of sciences, he is a founding member of the French Academy of Technologies, a member of the Air and Space academy and a foreign member of the National Academy of Engineering of the United States and of the Chinese Academy of Engineering.