

# **ACT workshop - Looking 20 years ahead**

**Wednesday, 14 September 2022 - Thursday, 15 September 2022**

**ESTEC**

## **Scientific Programme**

## Day 1 14th September

### Scientific Crowdsourcing and Open Science

Opening up of scientific research to allow the free flow of ideas and inspiration between academia and the wider community has greatly spurred innovation. In this session we will draw on this progress to discuss how the space sector can also benefit from the open science approach.

### Drawing Inspiration from Nature

Life finds a way: biomimetics allows us to draw inspiration from natural solutions to fundamental problems and translate them into new concepts and technologies. In this session we will explore some novel bio-inspired material and computing concepts and the next evolution of the field.

### The Spacecraft of Tomorrow

What will the spacecraft of tomorrow be like? What technologies researched today can revolutionise on-board capabilities and power efficiency? In this session we will look at breakthrough advances in materials, on-board hardware and software that may play a role in shaping this vision.

### Fundamental Physics Matters

Today's fundamental physics lays the foundation for tomorrow's engineering. In this session join us as we journey from the smallest to the biggest structures in the universe and study their surprising relations: 40 orders of magnitude in 40min!

More information on past and ongoing ACT projects can be found at the ACT website

## Day 2 15th September

### The Space Unconference

Join us to build a vision of the future!

The Space Unconference is a conference where YOU get to decide what talks to deliver/listen to! No preparation is needed, just join us at the event and, should you feel like, propose to moderate a session, else vote and contribute to the topics proposed by others. A session can be proposed the day of the event on whatever you want: generic on interstellar travel or on the role of evil AI systems in tomorrow's missions but also specific on quantum communication technologies or on a math theorem you like or on any latest development you worked on and you would like feedback/brainstroming on!

Scheduled session moderators will have to lead and feed the discussion in the slot allocated, minutes will be collectively taken using the etherpad technology facilitated and explained by a member of the ACT assigned to the room.

