



**RZESZOW UNIVERSITY  
OF TECHNOLOGY**



**THE FACULTY OF  
MECHANICAL ENGINEERING  
AND AERONAUTICS**  
RZESZOW UNIVERSITY OF TECHNOLOGY

# Department of Aerospace Engineering

<https://kilik.prz.edu.pl/en/>



# Organization of the DAE

## Our Unit

- Rzeszow University of Technology
  - Faculty of Mechanical Engineering and Aeronautics
    - Department of Aerospace Engineering (DAE)

## Our Team

- 32 scientific researchers and 8 technician specialists
- 3 main research and teaching areas
  - aircraft and aircraft engines construction
  - strength of the materials
  - aerodynamics and fluid mechanics





# Organization of the DAE

## Our facilities

- Aircrafts
- Turbojet and turbine engines
- Wind tunnels
- Strength cage



*Located in two halls at the Campus*





# Laboratories



## Aircraft construction

- 3 aircrafts for study of the structure
- AOS-71 prototype multifunctional electric glider
- UAVs designed and manufactured in DAE



## Aircraft engines

- Turbojet and turbine engines (modern and historical, ex. JT15D)
- Scaled internal combustion engines with test bench
- Simulator of turbo-fan engine with FADEC system



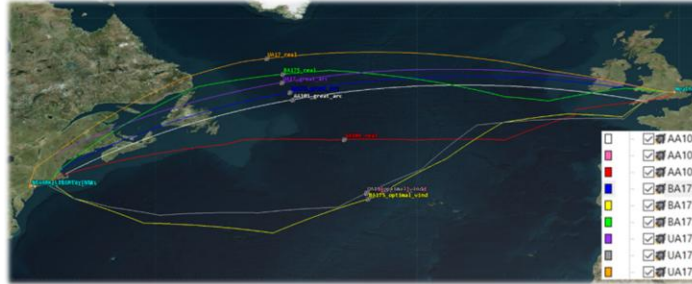
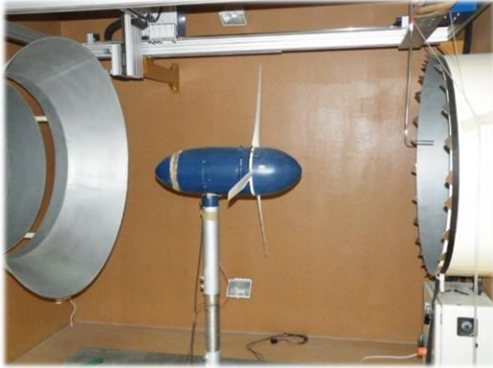
## Structural strength laboratories

- Strength cage with reinforced floor
- Material fatigue and modal charact.
- Aeroelasticity and Structural Dynamics
- Tensometric and optical polarization tests





# Laboratories



## Aerodynamics and fluid mechanics

- Subsonic wind tunnels:
  - open test section ,
  - with closed air flow,
  - didactic wind tunnel
- Supersonic wind tunnel (Guntt)
- Testing of the boundary layer

## Numerical analysis

- ANSYS™ Mechanical, Fluent, Heat
- STK AGI – mission analysis
- ESCAPE Light
- Matlab
- Solid Works

## Manufacturing

- Multi-axis machine tool
- Additive technology
- Composites workroom
- Assembling of UAVs





## Research projects, cooperation

- European Personal Aircraft Transportation System – EPATS
- Integrated Ground and on-Board system for Support of the Aircraft Safe Take-off and Landing – GABRIEL
- AOS 71 / AOS H2 multifunctional glider with electric propulsion
- UAV series
- SESAR 2020 PJ.06-02 ToBeFREE, PJ.10-05 PROSA (IFR RPAS Integration)
- strength tests of a cable car cabin– industry research





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THANK YOU 😊