

BSc/MSc Student Project Proposals

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Outline

1 Practicalities

2 Project topics

- Topics
- Jet engines
- Power generation
- Experimental measurements and multivariate analysis

3 Contact details

Practicalities

Practicalities

- **Group size:** 1 (min) to 5 (max) students per topic.
- **Credits:** 10hp, 15hp or 30hp (ERA305, ERA206/FLA302, or ERA400/ERA401).
- **Duration:** 10 or 20 weeks.
- **N.B.:** Dr. H. Li can support system integration work on the H2 EGR GT.

Project topics

List of project topics (1/2)

Jet engines

Conceptual design and techno-economic environmental risk analysis of a...

- Supersonic business engine.
- 3-Shaft turbofan engine.
- Turbofan engine for a high altitude long endurance unmanned air vehicle.

Power generation

Conceptual design and techno-economic environmental risk analysis of an...

- H₂-fired gas turbine powerplant with exhaust gas recirculation.
- An aero-derivative gas turbine powerplant.

List of project topics (2/2)

Experimental measurements and multivariate analysis

- Spectral measurements (NIR) and multivariate analysis for prediction of biofuel properties.

Student suggestions on
new topics are welcome!

Supersonic Business Jet Engine

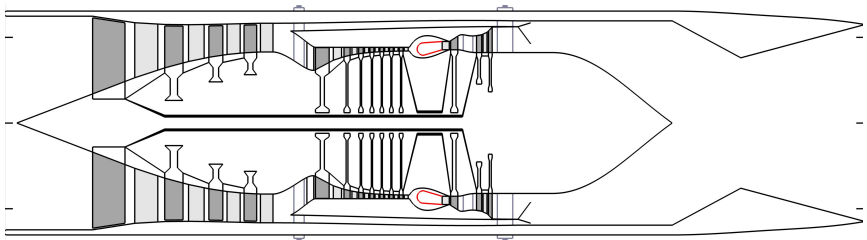
The Aerion AS2



Image courtesy of Aerion Corporation

Supersonic Business Jet Engine

MJ Haran S14



Designed By Joachim Kareliusson and Melker Nordqvist

3-Shaft Turbofan Jet Engine

The Rolls-Royce Trent 1000

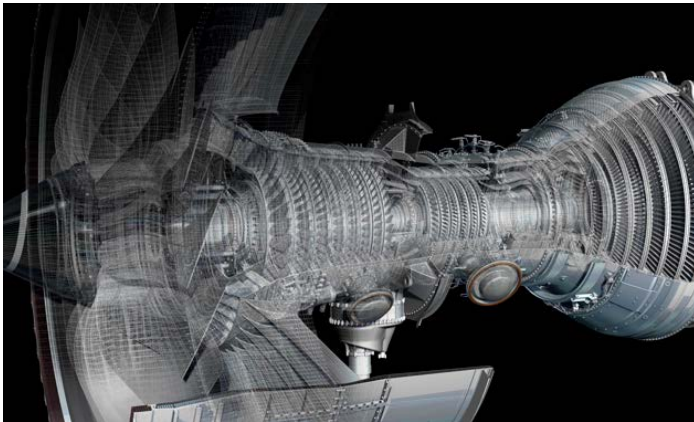


Image courtesy of Rolls-Royce plc

Turbofan Jet Engine for a High Altitude Long Endurance Unmanned Air Vehicle

The Global Hawk

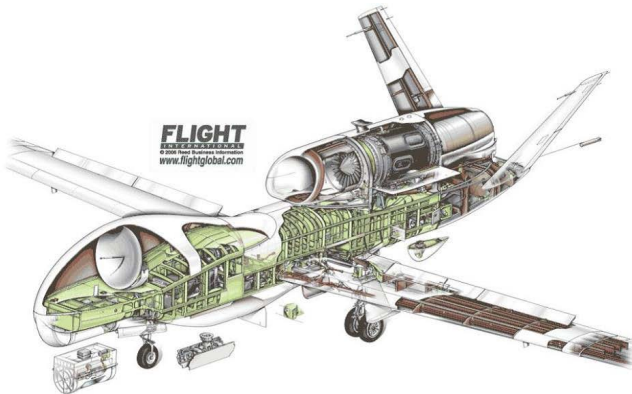
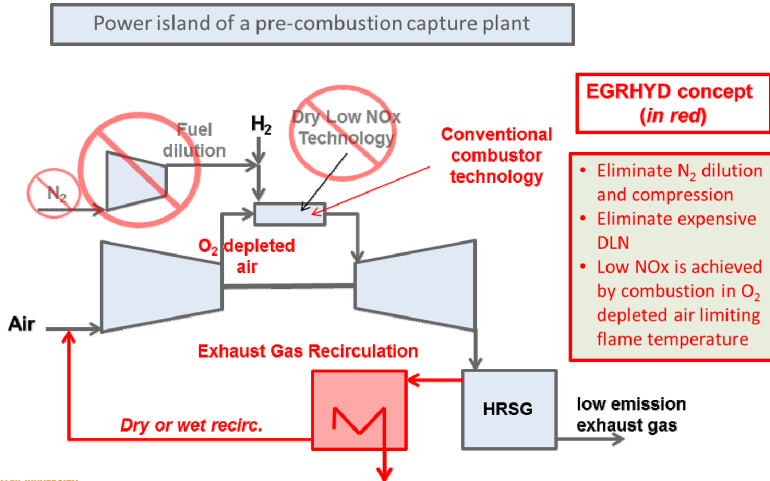


Image courtesy of Flight International.

Hydrogen-Fired Gas Turbine with Exhaust Gas Recirculation



Aero-Derivative Gas Turbine

The Rolls-Royce Trent series

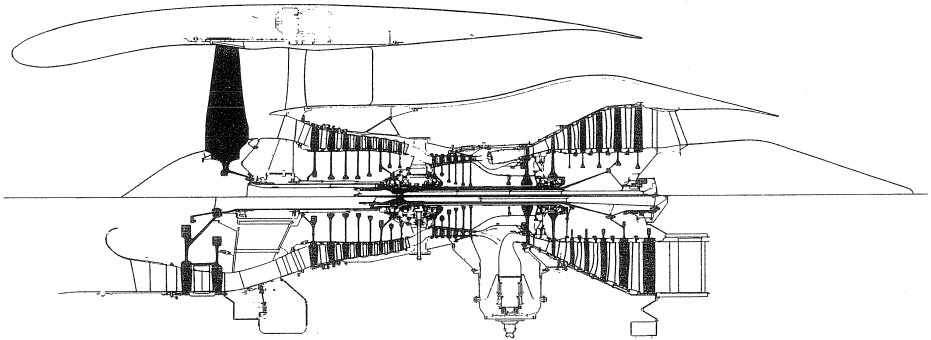
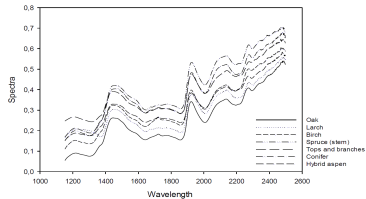
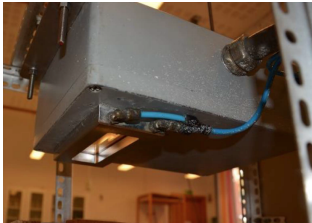


Image courtesy of Rolls-Royce plc

Experimental measurements and multivariate analysis

Spectral measurements (NIR) and multivariate analysis for prediction of biofuel properties.



Contact details

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