

## Research Project

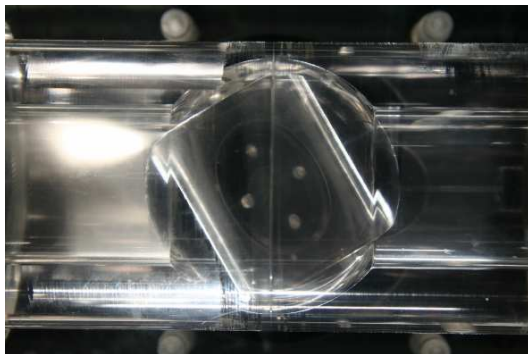
# ACTIVE VALVE AND PUMP TECHNOLOGY



### Motivation

This project is concerned with fuel systems for future aircraft and is directed at the development of component technologies, including pumps, motors and valves. One of the main aims of this work is to develop 'intelligent' components that will help to reduce system complexity and computational load.

Aircraft fuel systems are of particular interest because they can potentially lead to improved performance of refuel and fuel-transfer operations. The research is also considering advances in aircraft system technology, such as the introduction of 'frequency wild' electrical supplies.

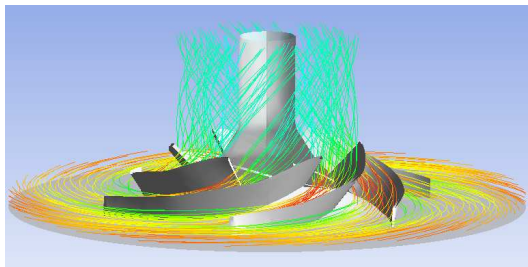


### On-going work

Computer simulation is being used to model the performance characteristics of fuel systems and their components including the fuel tanks, interconnecting pipework, control valves, electric drives and pumps. The models will be validated using data obtained from existing and new experimental facilities at Bath University, Airbus UK and Parker Aerospace.

These system models will then be applied to aircraft fuel systems.

### Industrial partners:



#### Researchers:

Lewis Boyd  
Andrew Roberts  
Grzegorz Skawinski

#### Academic staff:

Prof Kevin Edge  
Dr Derek Tilley  
Dr Nigel Johnston