

## Post-Doctoral Position in Aircraft Noise

### Starting Date: Available Immediately

Applications are invited for a post-doctoral positions in the area of aircraft noise and flight mechanics integration at the School of Mechanical, Aerospace, Civil Engineering (MACE) at the University of Manchester.

The project is funded under the EU *CleanSky* Framework. The key requirement is the development of the FLIGHT-NOISE modules of the comprehensive aircraft code FLIGHT. This research program, developed at the University of Manchester, simulates fixed-wing aircraft flight in full configuration.

The position focuses on noise interference, propagation and refraction. This aspect of the project requires the development of suitable computational methods (ray theory or otherwise) for the interference, propagation to far field, and the effects of the ground. He/She will have to develop ground information databases that will be used within the comprehensive framework, in order to optimize flight trajectories for minimum noise. The code is to be used by the aerospace industry as off-line simulation software in a Flight Management System (FMS), which controls aircraft flight. For this reason, the acoustic models implemented in the FLIGHT code must be low-order. To be useful, the acoustic solution must be achieved in a time comparable with the flight trajectory.

The successful candidates will have adequate experience in computational methods for acoustics (not necessarily computational aeroacoustics), proven knowledge of computational aerodynamics, software design, development and testing. Knowledge of scientific software development platforms (in particular, *Fortran 95* or later dialects), on *Windows* and *Linux*, is required. The candidates should be aware of version control options for collaborative work within our research group.

### Further Information:

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