University of Nottingham
UK | CHINA | MALAYSIA

Role profile

Job title	Research Associate/Fellow in Experimental Aerodynamics & Flow Control	Job family and level	Research and Teaching Level 4 (Appointment will be Level 4 Career training grade where an appointment is made before PhD has been completed)
School/ Department	Faculty of Engineering	Location	University Park

Purpose of role

To develop and wind tunnel test methods of maximising pulsed-jet actuator effectiveness while minimising their energy consumption for flow control around an aircraft wing.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	**% time per year**
1	Performing large-scale wind tunnel experiments, using both qualitative and quantitative measurement techniques	45%
2	Designing flow control-based optimisation tests and data analysis.	25%
3	Bench-testing/health monitoring of pulsed-jet flow control actuators.	10%
4	Write research reports and papers in order to disseminate research results and develop a track record of published research findings in international peer-reviewed journals. Further dissemination of results should also occur through invited oral and poster presentations at international meetings, conferences and seminars. Submit at least one paper manuscript to a recognized journal.	10%
5	Communicate with the consortium, participate and contribute to regular meetings of the research consortium	5%
6	Support developments of relevant PhD projects. Contribute to supporting research students with occasional advice. Contribute to the supervision of research projects undertaken by undergraduate and master level students if required.	5%

Person specification

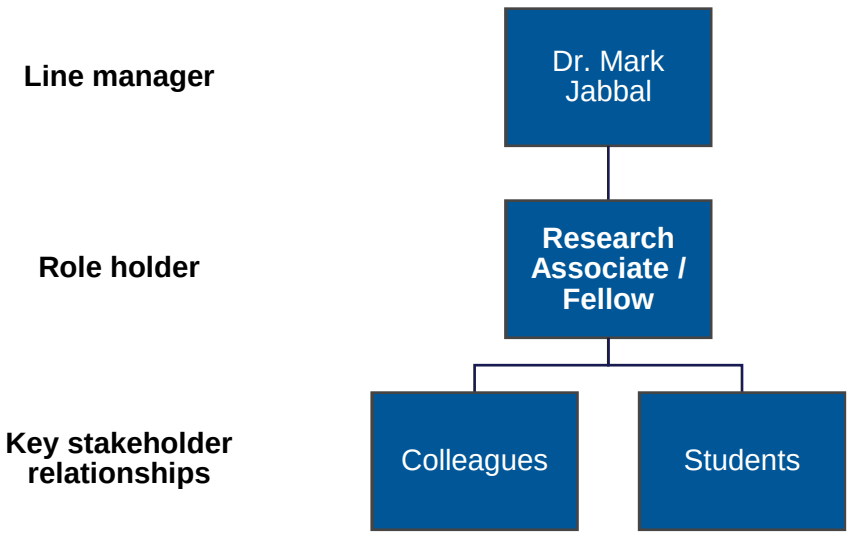
	Essential	Desirable
Skills	• Scientific report writing with a track record of publication in leading academic journals. • Designing experiments to analyse fluid flows. • Skills on programming.	
Knowledge and experience	• Running large-scale wind tunnel tests with both qualitative and quantitative measurement techniques • Knowledge on fundamental fluid physics. • Designing experiments to analyse fluid flows	• Flow control (e.g. drag reduction). • Pulsed-jet active flow control systems. • Knowledge and use of particle image velocimetry (PIV). • Knowledge and use of MATLAB and LABVIEW. • Machine learning methods and the application in fluid flow.
Qualifications, certification and training (relevant to role)	• A PhD (or about to obtain) in the area of experimental aerodynamics or fluid mechanics.	

Athena SWAN Silver Award

The University strongly endorses Athena SWAN principles, with commitment from all levels of the organisation in furthering women's careers. It is our mission to ensure equal opportunity, best working practices and fair policies for all.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
Taking ownership	Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
Forward thinking	Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
Professional pride	Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
Always inclusive	Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others