

# 2019 - 2020 Lectures

**5 May (7:00 pm) - Branch AGM followed by The North American X-15, the First Manned American Spacecraft** by Roger Allton, Loughborough Branch Member

The lecture will tell the story of the North American X-15 hypersonic rocket powered aircraft. The X-15 was an experimental aircraft which, in the 1960s, established a series of speed and altitude records.



**9 June (6:30 pm, Room J104, Edward Herbert Building) - Loughborough University MEng Final Year Aircraft Design Projects Joint Event with Dept of Aeronautical and Automotive Engineering**

This series of mini-lectures will be given by groups of final year MEng students and will describe the results obtained from their projects.

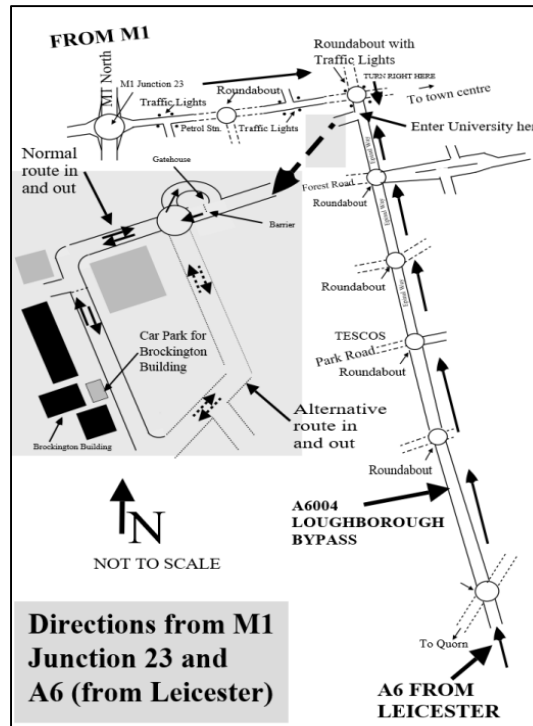
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Attendance at lectures is free to RAeS members and to students whether members or not, but other visitors are invited to make a donation of at least £3 per lecture. Alternatively those others can become 'Friends of the Branch' in return for a payment of £15 to cover the entire season of lectures. All are welcome and we hope to see you at one of our lectures soon.

## Branch Committee

Chairman: Prof. Jim McGuirk FRAeS  
Secretary: Colin Moss MRAeS, 62 Spinney Hill Drive, Loughborough LE11 3LD Tel.: 01509 239962  
Treasurer: Stephen Hogarth FRAeS  
Assistant Secretary: Dr. John Ollerhead OBE MRAeS  
Meetings Secretary: Dr. Vipran Kannan ARAeS  
Visits Secretary: John Newton MRAeS

**Other committee members:** Ivor Amos, Gerry Elloy MRAeS, Mike Hirst, Tony Irwin FRAeS, Mac Maccabee, Peter Nathanail, Daniel Nutt, John Robertson MRAeS, Paul Snelling MRAeS, Dr Adrian Spencer FRAeS, Goff Tearle MRAeS.



## Programme card 2019 - 2020



*Unless otherwise stated, all meetings commence at 7.30 p.m. and will be held in Room U020, Brockington Building, Loughborough University (see map on page 6).*

For the latest update to the Branch's programme consult our website at: [www.loughborough-raes.org.uk](http://www.loughborough-raes.org.uk)

### 2019

**15 October - Beluga XL - Oversize Transport for the 21st century** by Veronique Roca, Airbus BelugaXL Technical Director & Chief Engineer

Veronique will tell us about the BelugaXL since its launch in Nov 2014: with the First Flight in July 2018, the BelugaXL is now in the middle of the Flight Test Campaign, on its way to certification later in Q3 2019.



### *Elfyn Richards Prestige Lecture*

**5 November - Battle of the X-planes – The Competition for the Joint Strike Fighter Programme** by Rear Admiral Simon Henley, RAeS Immediate Past President



Simon will explain how the programme was conceived, and talk through the two widely different concept aircraft. He will then go through the development

programme to bring the audience up to date with the current state of the F-35 Lightning II.

**19 November - The Fairey Rotodyne** by David Gibbings MBE CEng FRAeS Westland Helicopters, Chief Flt Test Eng (Rtd)

This lecture tells the story of Rotodyne from its conception through the flight test programme (including route proving) to the disappointment of its cancellation in 1962.



**10 December - The Heathrow Air Traffic Control System at 99% Capacity – Even under Crash Conditions** by Adam Spink, London Heathrow ATC

Overview of Heathrow ATC and how it copes with the demands of delivering a schedule which is planned to 99.5% of capacity. The lecture includes a detailed Playback of the BA38 crash and how ATC coped with this.



### 2020

**21 January - Nanosatellites: Enabling Technologies for Novel Mission Architectures**

by Dr Kate Smith, Lecturer in Aerospace Engineering, University of Manchester

The last 10 years have seen a rapid growth in the number of sub 10kg satellites generally classed as nanosatellites. This talk will review the potential technologies that could enable new constellation configurations for future large constellations of very small satellites.



**11 February - Quicksilver – regaining world water speed record for Britain** by Nigel MacKnight, Quicksilver Project Leader.



Nigel will describe the technical challenges and participation of a large number of talented engineering volunteers to bring about the vehicle to attempt to break the current

Water Speed Record, with the heaviest and most powerful challenger to date.

**25 February - High Alpha Testing and Flight Safety** by Terry Smith, BAE Flight Test (retired)

Lessons from 35 years of high incidence flight testing of combat aircraft - Sepecat Jaguar, Panavia Tornado, FBW Jaguar Digital FCS Demonstrator, EAP Demonstrator and Eurofighter Typhoon

**17 March - Rolls-Royce Electrification Strategy & The All-Electric Demonstrator ACCEL Project** by Matheu Parr, ACCEL Programme Manager, Rolls-Royce PLC

Electrification is an inescapable trend across aerospace markets as we all seek cleaner, more sustainable power. The ACCEL project is intended to pioneer this third wave of aviation.

