



**ROYAL
AERONAUTICAL
SOCIETY**
Loughborough Branch

2017/18 Season Programme (E-mail Edition Iss. 6)

For the latest update to the Branch's programme consult our website at:

www.loughborough-raes.org.uk

Branch Committee:

Chairman: Dr. John Ollerhead OBE MRAeS

Secretary: Colin Moss MRAeS, 62 Spinney Hill Drive, Loughborough LE11 3LD Tel.: 01509 239962

Treasurer: Stephen Hogarth FRAeS

Meetings Secretary: Dr. Vipran Kannan ARAeS

Visits Secretary: John Newton MRAeS

RAeS Young Persons' Network Rep: Charlie Dodd

Other committee members: Ivor Amos, Gerry Elloy MRAeS, Mike Hirst, Tony Irwin, Barry Jacobson, Mac Maccabee, Peter Nathanail, Daniel Nutt, John Robertson MRAeS, Paul Snelling MRAeS, Goff Tearle MRAeS.

Unless otherwise stated, all meetings commence at 7.30 p.m. and will be held in Room U020, Brockington Building, Loughborough University.

October 10 - MQ-9 Reaper UAV Operations by Paul Clark, UAS Flight Operations Manager, QinetiQ.

Reaper is one of the most capable Remotely Piloted Aircraft Systems (RPAS) currently in operational use. How do you fly such an aircraft when you are 8,000 miles away? How does it integrate with traditional manned aviation? What is a typical "Reaper day"? What is the future for RPAS?



7th Nov 2017 - Bloodhound Land Speed Record by Richard Noble OBE, Project Director, Bloodhound Project.

The Bloodhound Super-Sonic Car (SSC) is the world's most advanced straight-line racing car. It weighs 7.5 tonnes and develops 135,000 bhp from its combination of jet and rocket engines. The aim is to use the car to break the 1,000 mph barrier and set a new world land speed record. The lecture will describe the car, the sensation of driving it and provide an update on the plans to carry out the record attempt.

November 21 - e-Go Light Aircraft by Giotto Castelli, Co-founder and Chief Designer, e-Go.

e-Go is a revolutionary new lightweight sports aircraft first flown in 2013. It incorporates a canard mid-wing and a Wankel engine driving a pusher propeller. Why was the aircraft so designed? What is its potential over more conventional designs? The aircraft's designer will explain.

December 5 - Corporate Jet Cabin Evolution by David Velupillai, Marketing Director, Airbus Corporate Jets, Toulouse.

Along with mission capability, the aircraft cabin is the aspect of most interest to corporate jet customers. The speaker will give us an insight into the corporate jet world and, in particular, to the factors governing cabin design.



January 16 - The Real Story of the Comet Disasters by Paul Withey, Rolls-Royce Engineering Associate Fellow in Casting Technology, Visiting Professor at the University of Birmingham..

The de Havilland Comet was the first commercial jet aircraft. Two accidents in 1954 grounded the Comet fleet. This talk will review the accident investigation and use modern analysis to review the fatigue failure which sparked the research.

February 6 - Graphene - The New Material for Aviation by Dr. Matthieu Gresil, School of Materials, Manchester University.

Graphene and its derivatives have been widely investigated to improve the properties of material such as epoxy resin. This talk will describe the outstanding potential to manufacture multi-functional nano-composites from graphene and epoxy resin for aerospace applications.

February 20 - The Airlander Airship Project by Andy Barton, Hybrid Air Vehicles

Airlander is a new class of aircraft which combines the properties of an airship, aeroplane and helicopter. The speaker will describe the technical progress of the project from its start as the Long Endurance Multi-Intelligence Vehicle (LEMV) to the present-day flight test programme.



March 13 - Rolls-Royce Aero Engines: A Proud Heritage and an Exciting Future by Prof. Ric Parker CBE, ex. Technical Director Rolls-Royce.

Rolls-Royce's involvement with jet engines dates back to WWII and piston based aircraft engines much further. The speaker will discuss both the history and future of Rolls-Royce's engine development and production programmes.

(Elfyn Richards Prestige Lecture)

May 8 - Sopwith Camel and Eurofighter Typhoon, Modern Air Combat Fighters of their day by Dr. Eric Gillies, Glasgow University.

The talk is a mixture of a technical explanation, anecdotes and pilot's notes from the time. A comparison is made between the unstable, and agile Camel and the stable fighters that came after. Finally, a comparison will be made with today's fly-by-wire stabilised Typhoon. *(preceded by AGM at 7.00 p.m.)*

June 12 (7.00 p.m.) Loughborough University MEng Final Year Aircraft Design Projects - Short lecture series. Joint Event with Loughborough University Dept of Aero & Auto Engineering.

This is an annual event. A series of mini-lectures will be given by groups of final year MEng students and will describe the results obtained from their projects. *(Venue : Lecture Theatre J104, Edward Herbert Building.)*