

**RAeS Loughborough Branch – 2018\_9 Programme Iss. 4 06\_05\_2018**

Date	Lecture	Lecturer/ Synopsis
16 <sup>th</sup> Oct 2018	Queen Elizabeth Class Aircraft Carriers – Flagships for the Future by Mark Dannatt, Project Director, UK MoD  <i>Elfyn Richards Prestige Lecture</i>	The lecture looks at the role of these ships together with some key design features. It concludes with an overview of the programme.
5 <sup>th</sup> Nov 2018 (Monday*)	Taranis UAV Flight Testing by Jon Wiggall, BAE Systems – Military Air and Information  <i>Possible Joint lecture with Loughborough University Velocity Society</i>	The presentation reviews the objectives, scope and challenges of the Taranis programme; discussing the approach adopted with respect to the safety case that is considered necessary to test a large, experimental unmanned technology demonstrator. By combining safety by design and additional operational mitigations, a viable safety case has been constructed to permit experimental flight trials of this unique UK aircraft.
20th Nov 2018	Chasing Bears in the Phantom by Captain Nick Anderson, Virgin Atlantic and ex-RAF fighter pilot.	This lecture will describe the life of a Phantom pilot in the 1970's and centre on the exciting job of chasing Russian Tu-95 Bear long range reconnaissance aircraft over the North Sea as they approached UK airspace.

**\*Lecture date set for a Monday to maximize potential of student attendance.**

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11 <sup>th</sup> Dec 2018	From ocean to stratosphere with solar energy by Raphael Domjan, SolarXplorers SA ( <a href="http://www.solarstratos.com">www.solarstratos.com</a> )	During the lecture, Raphaël tells the story of these incredible adventures and explains why he is so committed in protecting our planet. A story sprinkled with inspiring videos and photographs and amusing anecdotes.
22 <sup>nd</sup> Jan 2019	Computational Fluid Dynamics (CFD) by Prof. Gary Page, Dept. Aeronautical Engineering and Transport Studies, Loughborough University	This lecture will provide a layman’s approach to the importance of computational fluid dynamics in the context of modern aircraft design and development.
11 <sup>th</sup> Feb 2019 (Monday*)	In the Blink of an Eye (Head- Mounted Displays Development within BAE Systems) by Alex Cameron, Product Manager Survivability, Targeting & Sensing Solutions, BAE Systems Electronic Systems <i>Possible Joint lecture with Loughborough University Velocity Society</i>	This lecture will describe BAE Systems journey into Head Mounted display systems. It will also provide a vision on the future for head worn systems their capabilities and applications.
26 <sup>th</sup> Feb 2019	Commercial Helicopter Operations (talk already given to RAeS Cranwell Branch) by Steve Hogarth, Aviation Consultant and RAeS Loughborough Branch Treasurer	This lecture will describe the operation of commercial helicopters especially in the context of the North Sea oil and gas platforms.
19 <sup>th</sup> March 2019	Hybrid Electric Aircraft by Dr. Panagiotis Laskaridis, Senior Lecturer, Centre for Propulsion Engineering, Cranfield University <i>Possible Joint lecture with IMechE</i>	The presentation reviews various Concepts of Operations (CONOPS) related to hybrid electric technologies applied to different aircraft. The derived CONOPS are then used to propose a technical roadmap identifying critical technologies, synergies, modelling methods, systems architectures and evaluation methods related to operational aspects. Future market drivers, metrics and challenges are also considered.

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7 <sup>th</sup> May 2019	<p>Blue Steel – The V Forces Stand-off Bomb by Air Commodore Norman Bonnor FRAeS FRIN RAF (Ret'd)</p> <p><b>Lecture to be preceded by AGM at 7.00 p.m.</b></p>	<p>As the V-Force was forming in the mid-1950s, intelligence showed that the Soviet Union had started developing Surface-to-Air Missiles that would threaten high flying bombers; this became more obvious when Gary Powers' U2 was shot down on 1st May 1960. The Air Staff recognised that a stand-off attack capability was required, and the development began of what was to become Blue Steel. The project suffered many delays caused by problems during development trials in Australia, but Blue Steel eventually entered service in October 1962. Carried by five squadrons of Victor and Vulcan Mk2s, it remained the primary weapon system of the UK's Strategic Deterrent until it was replaced by Polaris in 1969.</p>
<p>11<sup>th</sup> June 2019 (check this date with Loughborough University Dept of Aero &amp; Auto Eng.)</p>	<p><b>Loughborough University MEng Final Year Aircraft Design Projects – series short lectures.</b> (<i>N.B. Start time 7.00 p.m, venue Room J104, Edward Herbert Building</i>).</p> <p>This series of mini-lectures will be given by groups of final year MEng students and will describe the results obtained from their projects.</p> <p><i>Joint Event with University Dept of Aero &amp; Auto Engineering</i></p>	

**Notes:**

1. Easter Monday is 22<sup>nd</sup> April 2019.
2. Committee meeting will be on Tuesday 8<sup>th</sup> January 2019.

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Visit No.	List of Possible Visits (as proposed by John Newton)	Date
1	Toyota factory, Burnaston	TBD
2	JCB	TBD
3	Large Model Aircraft Society Event/Museum: Cosford	TBD
4	Large Model Aircraft Society Event: East Kirkby, Lincs	TBD
5	RAF Museum, Hendon	TBD
6	Bruntingthorpe	TBD
7	Martin Baker (Ejection Seats)	TBD

**Visits Programme for the 2018/19 Season**