IMechE Aerospace North West

Meeting Minutes

A meeting of the IMechE Aerospace North West committee was held on Monday 16th April 2018 at David Lloyd Club, Chorley. The meeting commenced at 18:30 till 20:30.

<table>
<thead>
<tr>
<th>Chairman</th>
<th>Paul Gardner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice Chairman</td>
<td>VACANCY</td>
</tr>
<tr>
<td>Immediate Past Chairman</td>
<td>Euan Mason</td>
</tr>
<tr>
<td>Hon Secretary</td>
<td>Rebecca Donald-Lopez</td>
</tr>
<tr>
<td>Hon Treasurer</td>
<td>Manuel Donald-Lopez</td>
</tr>
<tr>
<td>Committee members</td>
<td>Martin Baxter</td>
</tr>
<tr>
<td></td>
<td>Ivan Dean</td>
</tr>
<tr>
<td></td>
<td>Dave Entwistle</td>
</tr>
<tr>
<td></td>
<td>Emma-Jane Guy</td>
</tr>
<tr>
<td></td>
<td>Martin Hyman</td>
</tr>
<tr>
<td></td>
<td>Andrew Medd</td>
</tr>
<tr>
<td></td>
<td>Thurai Rahulan</td>
</tr>
<tr>
<td></td>
<td>Joseph Soltan</td>
</tr>
<tr>
<td></td>
<td>Clive Winby</td>
</tr>
</tbody>
</table>

1 ATTENDEES

Rebecca Donald-Lopez       BAE SYSTEMS / Hon Secretary IMechE ANW
Dave Entwistle              BAE SYSTEMS
Paul Gardner                Safran Nacelles / Chairman IMechE ANW
Martin Hyman                Business Consultant
Andrew Medd                 Education Advisory Group
Thurai Rahulan              University of Salford / Royal Aeronautical Society
Joseph Soltan               Solvay

2 APOLOGIES WERE RECEIVED FROM

Martin Baxter               BAE SYSTEMS
Ivan Dean                    Past Chairman IMechE ANW
Manuel Donald-Lopez          BAE SYSTEMS / Hon Treasurer IMechE ANW
Clive Winby                  SILCOMS Ltd.

A new member booked a ticket for the meeting via the website, but didn’t attend. Rebecca Donald-Lopez took an action to send a personal email to the next new meeting attendee books via the website.

Action: Rebecca Donald-Lopez

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West

Improving the world through engineering
Page 1 of 11
3 MINUTES FROM THE LAST MEETING

No corrections or comments were raised for the last meeting notes.

4 REVIEW OF ACTIONS FROM LAST MEETING

4.1 Paul Gardner to fix a date for a site visit in early to mid 2018 to Safran to see the automated fibre placement machine.
Action Carried Over

4.2 Paul Gardner to contact Burnley College regarding strengthening links with academia.
Paul reported that he will pursue this once we have an event ready to hold there. Paul will then ask for a representative to join our committee.
Action Carried Over

4.3 Martin Hyman to contact Martyn Shaw from Bolton University and see if he would be interested in joining the committee.
Martin Hyman reported that he hasn’t yet had a response from Martyn Shaw and that he will email him yet again.
Action Carried Over

4.4 Rebecca Donald-Lopez to contact Billy Beggs, UCLan’s Engineering Innovation Manager for a possible link with the committee.
Rebecca has sent an email and is awaiting a response – see section 7 for more details.
Action Carried Over

4.5 Paul Gardner to obtain contact for Blackpool Spitfire simulator. Paul to query what will be the difference between the IMechE event and events open to the general public.
Paul Gardner reported that the Spitfire simulator in Blackpool is open to the public on the 1st Sunday of every month. Discussion took place regarding what added value an ANW visit would give. It was decided that if in addition to a go on the simulator, we could be shown around the aircraft by a guide for around 30 minutes and maybe told some exciting information specific to that aircraft, the visit would be worthwhile. It was also suggested that we could visit the Spitfire at Fairhaven Lake afterwards.
Action Carried Over: Paul Gardner took an action to follow this up.

4.6 Paul Gardner is going into the new MBDA facility to do some ‘benchmarking’ and will try to get us a visit to the facility. Paul’s contacts were all based at other sites so this needs to be pursued with Andrew Medd’s contacts.
Paul Gardner reported that he hadn’t followed this up as the visit went ahead without him as he was in Paris at the time. Security for this event will be tight and we will most likely not be able to advertise it to members.

**Action Carried Over**

4.7 **Joseph Soltan** to confirm a date for a visit to Solvay in September so that further arrangements can be made.

**Action Carried Over – Also see section 9.2.**

4.8 **Paul Gardner** to get Stands to Unmanned Aerial Vehicles (UAV) - British Antarctic Survey Lecture.

**Action Complete**

4.9 **Manuel Donald-Lopez** to get Gifts for Speakers to Unmanned Aerial Vehicles (UAV) - British Antarctic Survey Lecture.

**Action Complete**

4.10 **Clive Windby** to ask contacts if anyone knows a suitable speaker for a talk on Manchester Airport modifications.

**Action Carried Over**

4.11 **Manuel Donald-Lopez** to speak to Queen Elizabeth Class integration team and see if anyone can do a talk on the upcoming F35 trials.

**Action Carried Over**

5 **TREASURERS REPORT**

Rebecca Donald-Lopez circulated the finances provided by Manuel Donald-Lopez, see appendix 2 for further information. It was noted that two lots of grant have been received on the same day for a similar amount.

**Action:** **Manuel Donald-Lopez** to ask HQ if this was an error.

6 **AEROSPACE DIVISION & HQ UPDATES**

Paul Gardner reported that nobody attended the last Aerospace Board meeting at HQ on our behalf on 13/3/18. He also reported that he’s not yet received the minutes from that meeting. However he did report that AMSTAC were trying to organise an event in Manchester at the National Graphene Institution, but HQ want it to be held at Birmingham NEC as a side event. AMSTAC have a proposed programme and list of Speakers, and wondered if we could support the organisation of the event in Manchester. The proposal is a full day event during the week. It was noted that employers these days are more reluctant to send employees out for these kinds of events during works time. This type of event was questioned and it was therefore suggested that the event be broken down into a few evening lectures spread over a few months. Spring 2019 was suggested and it was thought that we should have the full program published before we hold the first event, for advertising at each event.
**Action:** Paul Gardner took an action to feed these suggestions back to AMSTAC. Paul also reported that the AGM is on Tuesday 22\textsuperscript{nd} May and includes a lecture on Electrification of Aircraft.

### 7 IMPROVING LINKS WITH ACADEMIA

Rebecca Donald-Lopez reported that she had emailed Dr Darren Ansell (Space and Aerospace Engineering Lead for the School of Engineering at UCLAN) and Billy Beggs (UCLan’s Engineering Innovation Manager) regarding, strengthening links between ANW and UCLAN and a lecture on the use of Graphene in the Space & Aerospace Industry.

Andrew Medd has been in contact with UCLAN on behalf of Lancashire area, regarding a visit to their flight simulator and the Engineering Innovation Centre once open. The EIC is expected to open in spring 2019. It was thought it would be difficult to run the flight sim event on its own. It was decided that ANW would like to joint badge this event with Lancashire Area.

### 8 POOR EVENT ATTENDANCE

A discussion took place regarding the attendance of young people at lectures and people who have registered for lectures not turning up. Various suggestions of how to avoid people registering and not turning up were received:
- Paid events
- Refundable deposits
- Receiving CPD point for attending

**Action:** Rebecca Donald-Lopez to email Emma Guy and ask ‘what’s the official guidance on event attendance counting towards CPD/Chartership?’

David Entwistle suggested that young people may be more interested in events such as Blood hound or Model Aircraft.

### 9 EVENTS & ACTIVITIES PROGRAMME - 2018

The preferred day for events to be held is a Tuesday.

#### 9.1 Unmanned Aerial Vehicles (UAV) - British Antarctic Survey

- **Event Review**
  - **Title:** Unmanned Aerial Vehicles (UAV) - British Antarctic Survey
  - **Speaker:** Phillip Slater, Managing Director, UAVE Ltd
  - **Date:** Wednesday 21\textsuperscript{st} March 2018
  - **Venue:** David Lloyd Club Chorley
  - **Time:** 18:00 for 18:30
  - **Organiser:** Martin Hyman

[http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West](http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West)
The number of attendees at this event was very disappointing. However the event was reported as a fascinating lecture and that the audience was fully engaged. It was reported that the speaker ‘knew his stuff’ and that there were lots of questions at the end. 26 people registered for the event but only 17 actually turned up on the night.

9.2 Solvay Visit

| Title: | Technical visit to Solvay |
| Date: | TBD September 2018 |
| Venue: | Solvay, Wrexham or Heanor, Derby |
| Time: | TBD |
| Organiser: | Joseph Soltan |

Joseph Soltan reported at the last meeting that a visit would be in the form of a lecture followed by a tour around the R&D labs. This would be in Wrexham so may require a minibus to get people there. The visit would be for 20 people who would need to be UK passport holders.

Joseph Soltan reported at this meeting that he has opened dialogue with Solvay regarding a visit to the Solvay Composites site in Heanor Derby. He reported that the Solvay Interox site in Warrington has a few demonstrations but not as much interaction as the Heanor site.

Martin Hyman suggested that we ask them to hold a lecture in the North West first and then gauge interest in a visit to Derby from the attendees. It was asked if the company could bring something of interest up with to show at the lecture.

It was also suggested we hold the event in Burnley due to its connection with composite materials.

**Action:** Joseph Soltan took an action to liaise with Solvay regarding a lecture in the North West and try to set a date in September.

9.3 SAFRAN Nacelles Visit

| Date: | TBC early to mid 2018 |
| Venue: | SAFRAN Nacelles Burnley |

Paul reported that he still needs to confirm a date.
9.4 Other Event Ideas

9.4.1 Model Aircraft event
Andrew Medd reported that Lancashire area ran a Model Aircraft event in Witton Park in Blackburn a couple of years ago, that also included drones. **Action: Andrew Medd** took an action to obtain contact details for the event from Lancashire Area.
Thurai Rahulan reported that RAeS Manchester branch were running a Model Aircraft event at the Woodford Heritage Centre in September.

9.4.2 Joint Event with RAeS Manchester Branch
Thurai Rahulan asked if the committee would like to joint badge an event with RAeS Manchester Branch in October and if we had any ideas for a topic. It was suggested that we hold a joint event on the Beluga XL. Thurai reported that he has a contact, Behrooz Bazegar.
**Action: Thurai Rahulan** took an action to contact him to ask if he will present a lecture on Beluga XL, in Manchester in October.

9.4.3 ‘Rocketman’ David Bennett
David Entwistle suggested we consider ‘Rocketman’ David Bennett for a lecture. However the committee was informed that David’s event charges are very high.

9.4.4 Air Accident Investigation/Human factors
David also suggested Air Accident Investigation / Human factors lecture, however the committee remember that we recently organised a lecture on this subject at Warton.

9.4.5 Missiles
Andrew Medd suggested we hold an event on missiles either aerospace or submarines.

10 ANY OTHER BUSINESS

10.1 Speaker contact details request
Rebecca Donald-Lopez reported that she has had a request from Sussex and Surry Area Committee, asking for the contact details of Mark Wood from Reaction Engines.
**Action: Martin Hyman** to contact Mark Wood and ask if he’s happy to have his details passed on.

10.2 Co-Ordination between meetings
David Entwistle suggested that we co-ordinate more in between meetings.

[http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West](http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West)
10.3 Succession Planning

Paul Gardner reported that due to the work commitments of a new job, he may not be able to attend as many meetings in the future and that we need to think about succession planning. Also as Arreyhon Alemi has now left the committee, there is nobody in the vice chair role.

David Entwistle declared his interest in the role of vice chair.

**Action:** Rebecca Donald-Lopez took an action to email the committee asking if anybody else is interested in the role and state David’s interest.

**Action:** Paul Gardner took an action to draft an email to send to the region asking for new committee members.

11 DATE OF NEXT MEETING

Paul Gardner reported that he is unavailable to attend the next meeting on Monday 21st May. It was decided to move the date of the meeting.

**Action:** Rebecca Donald-Lopez took an action to create a doodle poll in order to find a suitable date for the next meeting.

Since the meeting, the date decided by doodle poll was:

Next meeting: Thursday 24th May 2018— at UCLAN, Preston, time and room TBD.

12 DATE OF PROPOSED IMECHE COMMITTEE MEETINGS 2018

- Monday 22 January 2018
- Monday 5 March 2018
- Monday 16 April 2018
- **Thursday** 24 May 2018
- Monday 2 July 2018
- Monday 3 September 2018
- Monday 15 October 2018
- Monday 3 December 2018

**Minutes taken by:**
Rebecca Donald-Lopez
Hon Secretary IMechE Aerospace North West
16th April 2018
Appendix 1

IMechE ANW 2018 Programme

* TUESDAY is the preferred day for events to be held

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>VENUE</th>
<th>TITLE</th>
<th>LECTURER</th>
<th>ORGANISER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday 10 January</td>
<td>13:30 for</td>
<td>UCLAN</td>
<td>Emergency Service Drone Use</td>
<td>Martin Hyman</td>
<td>Joint with Fire Service</td>
</tr>
<tr>
<td>2018</td>
<td>14:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday 18 January</td>
<td>18:00 for</td>
<td>MMU Room JDT0.03</td>
<td>Trent Engine</td>
<td>Frank Kirkland</td>
<td>Paul Gardner</td>
</tr>
<tr>
<td>2018</td>
<td>18:30</td>
<td>John Dalton Building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wednesday 21 March</td>
<td>18:00 for</td>
<td>David Lloyd Club</td>
<td>Unmanned Aerial Vehicles (UAV) - British Antarctic Survey</td>
<td>TBD</td>
<td>Martin Hyman</td>
</tr>
<tr>
<td>2018</td>
<td>18:30</td>
<td>Chorley</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>September 2018</td>
<td></td>
<td>Solvay Wrexham</td>
<td>Visit to Solvay Wrexham or Derby facility</td>
<td>Joseph Soltan</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>or Derby</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 2018</td>
<td></td>
<td>Beluga XL</td>
<td>Beluga XL /Aerodynamics &amp; Commercial Aircraft</td>
<td>Behrooz Barzegar</td>
<td>Thurai Rahulan Joint with RAeS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>/Aerodynamics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&amp; Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aircraft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>November 2018</td>
<td></td>
<td>Use of</td>
<td>Use of graphene is Aerospace</td>
<td>Billy Beggs</td>
<td>Rebecca Donald-Lopez</td>
</tr>
<tr>
<td></td>
<td></td>
<td>graphene is</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aerospace</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD 2018</td>
<td></td>
<td>SAFRAN Nacelles</td>
<td>Visit to SAFRAN Nacelles</td>
<td>Paul Gardner</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Burnley</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West

Improving the world through engineering
Page 8 of 11
## Appendix 2

### Treasurers Report

**Nat West Account Ledger**

<table>
<thead>
<tr>
<th>Description</th>
<th>Credit</th>
<th>Debit</th>
<th>Running Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Balance</td>
<td></td>
<td></td>
<td>£3,794.03</td>
</tr>
<tr>
<td>Payment for 2017 FAAM Lecture</td>
<td>£412.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for 2017 UAS Challenge Lecture</td>
<td>£428.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Drones in Fire Service Lecture</td>
<td>£180.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gifts for Speakers</td>
<td>£205.12</td>
<td></td>
<td>£2,900.73</td>
</tr>
<tr>
<td>January Committee Meeting</td>
<td>£79.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joseph Sloan Expenses</td>
<td>£54.45</td>
<td></td>
<td>£2,846.28</td>
</tr>
<tr>
<td>March Committee Meeting</td>
<td>£89.55</td>
<td></td>
<td>£2,758.73</td>
</tr>
<tr>
<td>IMechE Grant</td>
<td>£2,160.00</td>
<td></td>
<td>£4,916.73</td>
</tr>
<tr>
<td>IMechE Grant</td>
<td>£2,260.00</td>
<td></td>
<td>£7,176.73</td>
</tr>
</tbody>
</table>

**TOTAL** £7,176.73
### Aerospace North West

**Projected Expenditure for period January 2018 to December 2018**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Expense Description</th>
<th>Credit (£)</th>
<th>Debit Predicted (£)</th>
<th>Balance Predicted (£)</th>
<th>Debit Actual (£)</th>
<th>Balance Actual (£)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-17</td>
<td><strong>End Balance from 2017</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-18</td>
<td>Payment for 2017 FAAM Lecture</td>
<td>Venue Hire and Catering</td>
<td>400.00</td>
<td>3808.53</td>
<td>4208.53</td>
<td>412.50</td>
<td>3796.08</td>
<td></td>
</tr>
<tr>
<td>Jan-18</td>
<td>Payment for 2017 UAS Challenge Lecture</td>
<td>Venue Hire and Catering</td>
<td>400.00</td>
<td>3406.53</td>
<td>3806.53</td>
<td>428.58</td>
<td>3378.45</td>
<td></td>
</tr>
<tr>
<td>Jan-18</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>78.00</td>
<td>3328.53</td>
<td>3394.51</td>
<td>79.60</td>
<td>3284.91</td>
<td></td>
</tr>
<tr>
<td>Jan-18</td>
<td>Use of Drones in Fire Service Lecture</td>
<td>Catering</td>
<td>180.00</td>
<td>3148.53</td>
<td>3328.53</td>
<td>180.00</td>
<td>3108.53</td>
<td></td>
</tr>
<tr>
<td>Jan-18</td>
<td>Rolls Royce Trent Lecture</td>
<td>Venue Hire and Catering</td>
<td>400.00</td>
<td>2748.53</td>
<td>3148.53</td>
<td>3105.95</td>
<td>No Invoice Yet</td>
<td></td>
</tr>
<tr>
<td>Feb-18</td>
<td>NA</td>
<td>Gifts For Speakers</td>
<td>200.00</td>
<td>2548.53</td>
<td>2748.53</td>
<td>205.12</td>
<td>2503.73</td>
<td>14 Pairs of Whiskey Glasses and 4 Tankards</td>
</tr>
<tr>
<td>Mar-18</td>
<td>Committee Meeting</td>
<td>Venue Hire, Catering &amp; Mileage Claims</td>
<td>78.00</td>
<td>2470.53</td>
<td>2548.53</td>
<td>144.00</td>
<td>2410.73</td>
<td></td>
</tr>
<tr>
<td>Mar-18</td>
<td>Over Weight and Over Here/ The Prior Mk3 UAV</td>
<td>Venue Hire and Catering</td>
<td>400.00</td>
<td>2070.53</td>
<td>2470.53</td>
<td>134.00</td>
<td>2336.73</td>
<td>Paid 252.30 via check to one speaker but it has not been cashed. Awaiting invoice from David Lloyd and expense claim from other speaker.</td>
</tr>
<tr>
<td>Mar-18</td>
<td>NA</td>
<td>IMechE Grant</td>
<td>2160</td>
<td>4230.53</td>
<td>2640.00</td>
<td>4916.73</td>
<td>Expected Grant Payment</td>
<td></td>
</tr>
<tr>
<td>Mar-18</td>
<td>NA</td>
<td>IMechE Grant</td>
<td>2260</td>
<td>6400.53</td>
<td>6660.00</td>
<td>7176.73</td>
<td>Unexpected Grant Payment on same day</td>
<td></td>
</tr>
<tr>
<td>Apr-18</td>
<td>Easy Jet Lecture</td>
<td>Venue Hire and Catering</td>
<td>300.00</td>
<td>6190.53</td>
<td>6490.53</td>
<td>7176.73</td>
<td>7176.73</td>
<td></td>
</tr>
<tr>
<td>Apr-18</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>78.00</td>
<td>8112.53</td>
<td>8190.53</td>
<td>7176.73</td>
<td>7176.73</td>
<td></td>
</tr>
<tr>
<td>May-18</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>78.00</td>
<td>6034.53</td>
<td>6112.53</td>
<td>7176.73</td>
<td>7176.73</td>
<td></td>
</tr>
<tr>
<td>May-18</td>
<td>Safire Noodles</td>
<td>Venue Hire and Catering</td>
<td>0.00</td>
<td>6204.53</td>
<td>6204.53</td>
<td>7176.73</td>
<td>7176.73</td>
<td></td>
</tr>
<tr>
<td>Jul-18</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>78.00</td>
<td>5966.53</td>
<td>5966.53</td>
<td>7176.73</td>
<td>7176.73</td>
<td></td>
</tr>
<tr>
<td>Sep-18</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>78.00</td>
<td>5878.53</td>
<td>5878.53</td>
<td>7176.73</td>
<td>7176.73</td>
<td></td>
</tr>
<tr>
<td>Oct-18</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>78.00</td>
<td>5800.53</td>
<td>5800.53</td>
<td>7176.73</td>
<td>7176.73</td>
<td></td>
</tr>
<tr>
<td>Dec-18</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>150.00</td>
<td>5650.53</td>
<td>5800.53</td>
<td>7176.73</td>
<td>7176.73</td>
<td></td>
</tr>
</tbody>
</table>

**Total Meeting Costs**  606.00  223.60  
**Total Events Costs**  2060.00  1021.08  
**Total Equipment Costs**  200.00  205.12  
**Total Expenditure for Year**  2978.00  1449.80  
**Year End Balance**  5860.53  7176.73
Appendix 3

Wish List of Future Events

- Samlesbury ASK Facility Visit
- Uber Vertical Taxi
- Jet Suit – Richard Browning
- Airbus Beluga XL
- Clean Sky 2 - compound helicopter
- Aero Gearbox International
- Wind Turbine Blades - Siemens have recently opened a factory in Hull.
- Manchester Airport Upgrade Plans – Clive Winby WIP
- Concorde & Son of Concorde – Next generation supersonic aircraft & Concorde Visit
- Subsidized visit to Concorde only– Aviation viewing park
- Nimrod replacement talk & visit – Aviation viewing park
- Model Aircraft
- Maintenance
- Aircraft ducting
- Aircraft de-icing
- Aerodynamics
- Hawk hook on AC carriers
- Hawk systems into a new airframe
- F35 Aircraft Carrier operations
- Hot Air Balloon lecture possibly combined with Balloon Festival
- Hand Glider Material
- Woodford Flight Simulator – Oxford Aviation
- Rolls Royce Engine Lecture (2021 development and 2025 Ultrafan)
- Aerial Survey/Google Maps
- New MBDA factory tour
- Space Tourism
- The Crash Detectives (book by Christine Negroni)
- Avionics Lecture