IMechE Aerospace North West

Meeting Minutes

A meeting of the IMechE Aerospace North West committee was held on Monday 22nd May 2017 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>Arreyhon Alemi</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>Emma-Jane Guy</td>
</tr>
<tr>
<td></td>
<td>Martin Hyman</td>
</tr>
<tr>
<td></td>
<td>Andrew Medd</td>
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<td></td>
<td>Iain Minton</td>
</tr>
<tr>
<td></td>
<td>Thurai Rahulan</td>
</tr>
<tr>
<td></td>
<td>Clive Winby</td>
</tr>
</tbody>
</table>

1 ANW ATTENDEES

Martin Baxter   BAE SYSTEMS
Rebecca Donald-Lopez   BAE SYSTEMS / Hon Secretary IMechE ANW
Paul Gardner   Safran Nacelles / Chairman IMechE ANW
Martin Hyman   Business Consultant
Andrew Medd   Education Advisory Group
Thurai Rahulan   University of Salford / Royal Aeronautical Society
Clive Winby   SILCOMS Ltd.

2 APOLOGIES WERE RECEIVED FROM

Ivan Dean   Past Chairman IMechE ANW
Manuel Donald-Lopez   BAE SYSTEMS / Hon Treasurer IMechE ANW

3 MINUTES FROM THE LAST MEETING

It was noted that the wrong date was reported on page 1 of the minutes from the last meeting (24 April 2017). Other than that they were agreed to be the true and accurate record.
4 REVIEW OF ACTIONS FROM LAST MEETING

4.1 Rebecca Donald-Lopez to inform Emma that the date of our meeting 26th June. 
   Action complete.

4.2 Manuel Donald-Lopez to make enquiries regarding the £1500 as it may be an error. Manuel has not heard back yet. Action carried over.

4.3 Paul Gardner to update the wording on the front page of the ANW website. Paul has looked at the website front page and decided that there is no need to update it. Action closed.

4.4 Rebecca Donald-Lopez to add all our meetings to the web site as events, in order to encourage new committee members. 
   Action complete.

4.5 Rebecca to bring gift for speaker and ANW stands to the next meeting for Martin to use at the Reaction Engines event. 
   Action complete.

4.6 Paul & Martin Hyman to ‘tweet’ the Reaction Engines event. 
   Action complete, see section 7.1.

4.7 Rebecca took an action to add a button to future event booking pages to ask where people heard about the event. 
   Action complete.

4.8 Clive Winby to check availability of Ian Davies on Tuesday’s in June 2017. Clive reported that he is meeting up with his brother tomorrow, so will get an update and let us know. Action carried over.

4.9 Rebecca to contact Peter Myler regarding Bolton Uni as a venue for Easy Jet event & parking arrangements. Rebecca contacted Peter who said the room is free, we just need to pay for food, let him know the date and he will book it. Action carried over.

4.10 Paul Gardner to find out if we can have a site visit in September to Safran to see the automated fibre placement machine. Paul reported that in principle yes the event is supported, but we don’t have a date agreed. Max no. of people is 15, unless we have 2 groups. It was decided to have the event in the evening or on a Friday. Action carried over.

4.11 Thurai to check 4th October is ok with Rashid for UAS Challenge at Salford Uni. 
   Action complete, see section 7.4.

4.12 Thurai to book room & food at Salford Uni for UAS Challenge. 
   Thurai reported that the room will be booked in the new term, nearer the time. Action carried over.
4.13 **Ivan Dean** to check which Friday afternoon in Oct is preferable to Mike Wallace for Rolls Royce Visit.

No news. **Action carried over.**

4.14 **Thurai** to confirm 22nd November with Guy Gratton for FAAM and topic of ‘Development of the test aircraft and what they do with it’.

**Action complete, also see section 7.6.**

4.15 **Rebecca** to ensure Members/Non-members check boxes are activated on the event booking website for FAAM & UAS.

**Action complete.**

4.16 **Thurai** to ask Preston Branch chair if we could have a rep. on our committee. We would like to fix a month or 2 each year in which to hold joint events. Thurai reported that he has asked Mike Elston to put it to his committee. **Action complete. Action:** Thurai to report back any replies.

4.17 **Martin Baxter** to try one more time to get a response from Fleetwood Helicopter Rig.

Martin reported that he left an answer phone message but has still not had a reply. It was decided not to pursue this further. **Action closed.**

4.18 **Paul Gardner** to confirm date for visit to Velocity Composites.

No news, **Action carried over.**

4.19 **Martin Hyman** to ask if British Antarctic Survey would bring the drone with them, if the Antarctic work was complete and if they would be willing to present the lecture in March 2018, in Chorley at the David Lloyd club. Martin also to check with David Lloyd. **Action complete, see section 8.1.**

4.20 **Paul Gardner** to ask Frank Kirkland if he will repeat his ‘Development of the Trent engine’ event in the North West. **Action carried over.** Paul to ask at the next Aerospace Division Board meeting.

4.21 **Rebecca** to copy our events to Nikki Barker (Regional Secretary) from Merseyside & North Wales region, in order to aid regions working more closely together. **Action complete.**

4.22 **Paul** to find out the date of the UAS Challenge event in Wales this year. Paul reported that the date of the next UAS Challenge is 19\(^{th}\) & 20\(^{th}\) June 17. **Action complete.**

4.23 **Paul** to bring the box of merchandise to the next meeting, to see if anybody would like any of it. **Action complete.**
5 TREASURERS REPORT
Manuel Donald-Lopez reported the current financial status is healthy, with a balance of £4,998.83.
Action: Manuel to feedback answer from HQ regarding the £1500 as it may be an error.

6 FEEDBACK FROM REGION/ DIVISON/HQ MEETINGS
Paul Gardner reported that he attended the last board meeting.
Action: Paul took an action to distribute the notes from the last meeting.
Paul reported that HQ has asked all board members what sort of events they believe HQ should be putting on. Paul reported that the Aerospace division aren’t doing anywhere near as well with event attendance as the Railway division.

The committee discussed this and it was noted that:
- IMechE have no presence at Air shows
- No big events are held outside London
- Event attendance costs are too high
- Events need to be free or at least a reasonable cost (£50 - £100)
- Events need to be very relevant
- Each session needs to be short and sweet

It was therefore suggested that the Aerospace Division hold a ‘Breakfast’ seminar at Farnborough Air Show on a Tuesday or Wednesday. 
Action: Paul took an action to suggest this to HQ.

7 EVENTS & ACTIVITIES PROGRAMME - 2017
The preferred day for events to be held is a Tuesday.

7.1 Reaction Engines
Title: SABRE - Next Generation Hypersonic Propulsion
Speaker: Mark Wood COO & Engineering Director, Reaction Engines Ltd.
Date: Tuesday 23 May 2017
Venue: MMU, Room JDE0.32, John Dalton Building
Time: 18:00 for 18:30
Organiser: Martin Hyman

Martin Hyman reported that all arrangements are in place for the event. Rebecca reported that 33 people have registered for the event, most people heard about the event from the IMechE email system. 1 person saw it on
the Reaction Engines website. Nobody reported hearing about the event from a tweet.

7.2 Easy Jet

Title: Ash to Ash, Dust to Dust
Speaker: Ian Davies, Head of Engineering, Easy Jet
Date: TBC June 2017
Venue: Bolton University
Time: 18:00 for 18:30
Organiser: Clive Winby

As per 4.8, Action: Clive Winby reported that he is meeting up with his brother tomorrow, so will get an update and let us know. Bolton University has been decided as the event venue. Rebecca has contacted Peter Myler at the university.

7.3 SAFRAN Nacelles Visit

Date: TBC September 2017
Venue: SAFRAN Nacelles Burnley
Time:
Organiser: Paul Gardner

Action: Paul Gardner to fix a date for a site visit in September to see the automated fibre placement machine.

7.4 UAS Challenge Lecture – Joint with RAeS Manchester Branch

Title: ??
Date: Wednesday 4 October 2017
Venue: Salford University
Time: 5:00 – 5:15pm Introduction to IMechE - Emma Guy
5:15 – 6:00pm Competition Rules & Regulations – Rashid Ali
6:00 – 6:15pm Break for Refreshments
6:15 – 7:15pm Emerging Technologies – Rashid Ali
Organiser: Thurai Rahulan

Thurai Rahulan reported that Rashid Ali has agreed to the date and format of the event. It was decided that we would like a brief introduction to IMechE before Rashid’s lecture. It was suggested we ask Emma Guy to do this. Action: Paul Gardner to ask Emma Guy if she will do a small presentation on IMechE before the event.

The timings were decided as above, and the venue as Salford University. Thurai reported that the room & food will be booked in the new term, nearer the time.
7.5 Rolls Royce Barnoldswick Visit

Date: Friday afternoon TBD October 2017
Venue: Rolls Royce Barnoldswick
Time: TBD
Organiser: Ivan Dean

See action 4.13.

7.6 FAAM – Joint with RAeS Manchester Branch

Title: ??
Speaker: Guy Gratton
Date: 22nd November 2017
Venue: Manchester MMU
Time: 18:00 for 18:30
Organiser: Thurai Rahulan

Thurai Rahulan reported that Guy Gratton has agreed to the date and format of the event. The lecture topic should be the development of the test aircraft and what they do with it.

**Action:** Martin Hyman to book the room at MMU for the FAAM lecture.

**Action:** Thurai to ask RAeS Manchester Branch to pay for the catering for this event, **£5.99 per head +VAT.** We should expect around 30 guests to attend.

8 EVENTS & ACTIVITIES PROGRAMME - 2018

8.1 Unmanned Aerial Vehicles (UAV) - British Antarctic Survey

Title: Unmanned Aerial Vehicles (UAV) - British Antarctic Survey
Speaker: TBD
Date: Wednesday 21st March 2018
Venue: David Lloyd Club Chorley
Time: 18:00 for 18:30
Organiser: Martin Hyman

Martin reported that he has been in contact with the speaker and David Lloyd and they have both agreed to the event. Philip Slater, Managing Director at UAVE, has agreed to bring the UAV along providing it fits in the building. Martin has measured the doors and they are big enough to allow the UAV through into the larger function room, however there is concern over the path approaching the doors.

**Action:** Martin to check access requirements with Philip Slater.
Action: Martin to book the larger conference room for Wednesday 21st March 2018.

8.2 Velocity Composites
Date: TBD 2018
Venue: Velocity Composites, AMS Technology Park, Billington Road, Burnley, BB11 5UB
Time: Friday Afternoon

Action: Paul Gardner to fix date for a visit.

9 ANY OTHER BUSINESS

9.1 Brexit Presentation by Colin Brown
Andrew Medd reported that Colin Brown gave a presentation on Brexit at the North West region AGM.
Action: Andrew Medd to send the presentation to Rebecca to circulate to the committee.

10 DATE OF NEXT MEETING
Next meeting: Monday 26th June 2017– at David Lloyd Club, Whittle le Woods, Chorley at 18:00 for 18:30.

11 DATE OF PROPOSED IMECE COMMITTEE MEETINGS 2017
- Monday 23 January 2017
- Monday 6 March 2017
- Monday 24 April 2017
- Monday 22 May 2017
- Monday 26 June 2017
- Monday 4 September 2017
- Monday 23 October 2017
- Monday 4 December 2017

Minutes taken by:
Rebecca Donald-Lopez
Hon Secretary IMechE Aerospace North West
22nd May 2017

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West
Appendix 1

**IMechE ANW 2017 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 15 February 2017</td>
<td>18:00 for 18:30</td>
<td>Canberra Club, BAE Systems Samlesbury</td>
<td>Hybrid Air Vehicles</td>
<td>Tom Grundy Operations Director at HAV</td>
<td>Lancashire Area</td>
</tr>
<tr>
<td>Friday 24 February 2017</td>
<td>10:00 – 12:30</td>
<td>Kaman Tooling Burnley BB10 2FT</td>
<td>Visit to Kaman Tooling Burnley</td>
<td>NA</td>
<td>Martin Hyman</td>
</tr>
<tr>
<td>Friday 31 March 2017</td>
<td></td>
<td>Hilton Hotel Manchester</td>
<td>North West Region Annual Dinner</td>
<td>NA</td>
<td>Region</td>
</tr>
<tr>
<td>Tuesday 23 May 2017</td>
<td>18:00 for 18:30</td>
<td>MMU JDEO.32 John Dalton Building</td>
<td>Reaction Engines</td>
<td>Mark Wood COO &amp; Engineering Director, Reaction Engines Ltd.</td>
<td>Martin Hyman</td>
</tr>
<tr>
<td>TBD June 2017</td>
<td>18:00 for 18:30</td>
<td>Bolton University</td>
<td>Ash to Ash, Dust to Dust</td>
<td>Ian Davies Easy Jet</td>
<td>Clive Winby</td>
</tr>
<tr>
<td>TBD September 2017</td>
<td></td>
<td>SAFRAN Nacelles Burnley</td>
<td>Visit to SAFRAN Nacelles</td>
<td>Paul Gardner</td>
<td></td>
</tr>
<tr>
<td>Wednesday 4 October 2017</td>
<td>17:00</td>
<td>Salford University</td>
<td>UAS Challenge Talk</td>
<td>Rashid Ali UAS Challenge Committee Academic &amp; Finance lead</td>
<td>Thurai Rahulan Joint with RAeS Manchester</td>
</tr>
<tr>
<td>Any Friday afternoon in October</td>
<td>Friday afternoon</td>
<td>Rolls Royce Barnoldswick</td>
<td>Visit to Rolls Royce Barnoldswick</td>
<td>Contact: Mike Wallace</td>
<td>Ivan Dean</td>
</tr>
<tr>
<td>Wednesday 22 November 2017</td>
<td>18:00 for 18:30</td>
<td>MMU</td>
<td>FAAM</td>
<td>Guy Gratton FAAM</td>
<td>Thurai Rahulan Joint with RAeS Manchester</td>
</tr>
<tr>
<td>TBD 2018</td>
<td>Friday afternoon</td>
<td>Velocity Composites, Billington Rd Burnley</td>
<td>Visit to Velocity Composites</td>
<td>NA</td>
<td>Paul Gardner</td>
</tr>
</tbody>
</table>
### Appendix 2

**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 21 March 2018</td>
<td>18:00 for 18:30</td>
<td>David Lloyd Club Chorley</td>
<td>Unmanned Aerial Vehicles (UAV) - British Antarctic Survey</td>
<td>TBD</td>
<td>Martin Hyman</td>
</tr>
<tr>
<td>TBD 2018</td>
<td>Friday afternoon</td>
<td>Velocity Composites,</td>
<td>Visit to Velocity Composites</td>
<td>NA</td>
<td>Paul Gardner</td>
</tr>
</tbody>
</table>
<pre><code>                         |                 | Billington Rd Burnley     |                                                                      |          |                  |
</code></pre>

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West
## Appendix 3

### ANW Finances

Projected Expenditure for period January 2017 to December 2017

<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>
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<tbody>
<tr>
<td>Dec-18</td>
<td>End Balance from 2016</td>
<td></td>
<td></td>
<td>3077.88</td>
<td>3077.88</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Jan-17</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>104.00</td>
<td>2973.88</td>
<td>84.60</td>
<td>2993.28</td>
<td></td>
<td>Less attendees than usual</td>
</tr>
<tr>
<td>Feb-17</td>
<td>Grant Payment</td>
<td>Grant from HQ</td>
<td>2260</td>
<td>0.00</td>
<td>5233.88</td>
<td>5233.88</td>
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<tr>
<td>Feb-17</td>
<td>Kaman Toping Burnley</td>
<td>N/A</td>
<td>0.00</td>
<td>5233.88</td>
<td>0.00</td>
<td>5233.88</td>
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</tr>
<tr>
<td>Mar-17</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>104.00</td>
<td>5120.88</td>
<td>88.65</td>
<td>5184.63</td>
<td></td>
<td>Less attendees than usual</td>
</tr>
<tr>
<td>Mar-17</td>
<td>Rolls Royce Samoldswick</td>
<td>N/A</td>
<td>0.00</td>
<td>5184.63</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mar-17</td>
<td>North West Region Annual Dinner</td>
<td>Ticket Purchase</td>
<td>100.00</td>
<td>5029.63</td>
<td>100.00</td>
<td>5089.63</td>
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</tr>
<tr>
<td>Apr-17</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>104.00</td>
<td>4925.88</td>
<td>65.90</td>
<td>4990.78</td>
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</tr>
<tr>
<td>Apr-17</td>
<td>Fleetwood Offshore Survival Centre</td>
<td>N/A</td>
<td>0.00</td>
<td>4990.83</td>
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<tr>
<td>May-17</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>104.00</td>
<td>4021.88</td>
<td>4990.83</td>
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<tr>
<td>May-17</td>
<td>Reaction Engines Lecture</td>
<td>Venue Hire and Catering</td>
<td>400.00</td>
<td>4021.88</td>
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<tr>
<td>Jun-17</td>
<td>Ash to Ash, Dust to Dust Lecture</td>
<td>Venue Hire and Catering</td>
<td>400.00</td>
<td>4021.88</td>
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<tr>
<td>Jun-17</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
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<td>3917.88</td>
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<tr>
<td>Sep-17</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
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<tr>
<td>Oct-17</td>
<td>UAS Challenges Lecture</td>
<td>Venue Hire and Catering</td>
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<td>3413.88</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Oct-17</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>104.00</td>
<td>3096.88</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Nov-17</td>
<td>FAAAM Lecture</td>
<td>Venue Hire and Catering</td>
<td>400.00</td>
<td>2906.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Dec-17</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>220.00</td>
<td>2689.88</td>
<td></td>
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</tbody>
</table>

| Total Meeting Costs | 948.00 | 84.60 |
| Total Events Costs  | 1700.00| 100.00|
| Total Equipment Costs| 0.00  | 65.90 |
| Total Expenditure for Year | 2648.09 | 250.40 |
| Year End Balance    | 2689.88| 4998.63|

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West
## 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>£3,077.66</td>
<td></td>
<td></td>
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<tr>
<td>January Committee Meeting</td>
<td>£84.60</td>
<td></td>
<td>£2,993.06</td>
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<tr>
<td>Grant Payment</td>
<td>£2,260.00</td>
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<td>£5,253.26</td>
</tr>
<tr>
<td>North West Annual Dinner</td>
<td>£100.00</td>
<td></td>
<td>£5,153.26</td>
</tr>
<tr>
<td>March Committee Meeting</td>
<td>£88.65</td>
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<td>£5,064.63</td>
</tr>
<tr>
<td>April Committee Meeting</td>
<td>£65.80</td>
<td></td>
<td>£4,998.83</td>
</tr>
</tbody>
</table>

**TOTAL**

|                  |        |       | £4,998.83       |

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Manuel Donald-Lopez  
Hon Treasurer  
I MechE Aerospace North West

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West
Appendix 4

Wish List of Future Events

- MBDA Visit - MBDA are not running visits again until August 2017.
- Airbus Beluga XL
- Visit to FOSC Fleetwood Offshore Survival Centre
- Clean Sky 2 - compound helicopter
- Rolls Royce Engine Lecture
- Aero Gearbox International
- Wind Turbine Blades - Siemens have recently **opened a factory in Hull.**
- Manchester Airport Black Museum Visit – 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
- Helicopters – accidents in the North Sea (RAeS to cover in February)
- Model Aircraft
- UAV’s
- Maintenance
- Aircraft ducting
- Aircraft de-icing
- Aerodynamics
- Warton Wind Tunnel Tour
- 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
- Rolls Royce Engine Lecture (2021 development and 2025 Ultrafan)
- Space Tourism
- The Crash Detectives (book by Christine Negroni)
- Use of Drones in Fire and Police