IMechE Aerospace North West

Meeting Minutes

A meeting of the IMechE Aerospace North West committee was held on **Monday 11th Nov 2019** at at David Lloyd Club, Chorley. The meeting commenced at 18:30 till 20:30.

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>David Entwistle</td>
</tr>
<tr>
<td>Vice Chairman</td>
<td>Vacancy</td>
</tr>
<tr>
<td>Immediate Past Chairman</td>
<td>Paul Gardner</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>Billy Beggs</td>
</tr>
<tr>
<td></td>
<td>Ivan Dean</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>Clive Winby</td>
</tr>
</tbody>
</table>

1 Attendees

- Martin Baxter (MB) BAE SYSTEMS
- Rebecca Donald-Lopez (RDL) BAE SYSTEMS / Hon Secretary IMechE ANW
- David Entwistle (DE) BAE SYSTEMS / Chairman IMechE ANW
- Paul Gardner (PG) Safran Nacelles / Past Chairman IMechE ANW
- Thurai Rahulan (TR) University of Salford / Royal Aeronautical Society

2 APOLOGIES WERE RECEIVED FROM

- Billy Beggs (BB) UCLA
- Ivan Dean (ID) Past Chairman IMechE ANW
- Manuel Donald-Lopez (MDL) BAE SYSTEMS / Hon Treasurer IMechE ANW
- Martin Hyman (MH) Business Consultant
- Andrew Medd (AM) IMechE Education Advisory Group
- Clive Winby (CW) SILCOMS Ltd.
3  **MINUTES FROM THE LAST MEETING**

The minutes from the last meeting held on 16th September were agreed as a true and accurate record.

4  **REVIEW OF ACTIONS FROM LAST MEETING**

4.1 **Rebecca Donald-Lopez to assess Blackpool Spitfire simulator.**

This has not been completed hanger is now closed until April. There is no mention of a simulator on the website it is a museum open to the public on first Sunday of each month. However Paul Gardner clarified that there is a flight simulator at the Spitfire Hanger in Blackpool but that it is a computer gaming type fixed simulator.

Thurai Rahulan reported that they have two flight simulators at Salford University. One simulator is a fully-enclosed single seat capsule mounted on a moving 2-degree of freedom platform which incorporates cockpit controls, integrated main head-up display and two secondary instrumentation display panels. The other is fixed base 2 seater Piper PA-34 Seneca III aircraft simulator used for flight operations training. Although he reported that it is quite slow. The Spitfire Hanger in Blackpool is closed for the winter now, it was therefore agreed to pause this action for now.

**Action on Hold**

4.2 **Rebecca Donald-Lopez to send email to the region to encourage new members.**

Rebecca reported that this will be done this week.

**Action Carried.**

4.3 **David Entwistle took an action to contact Martin Baxter for an update on the Solar Hale lecture.**

David Entwistle reported that Paul Brooks, Prismatic MD, has agreed to present a talk in the first quarter of 2020 on PHASA-35 (35m wingspan Persistent High Altitude Solar Aircraft), a Solar-powered electric HALE (high altitude long endurance) UAV. The committee decided on February and it was agreed that it should be held at Salford University in Room B2 Newton Building.

**Action: David Entwistle** took an action to check which date in February is suitable for Paul.

**Action: Thurai Rahulan** took an action to book the room once the speaker has confirmed the date.

**New Actions**
4.4 Billy Beggs to Confirm with Dr Darren Ansell Date for Demining In Cambodia
Rebecca Donald-Lopez reported that Billy Beggs had sent an email confirming that Dr Darren Ansell (Academic Lead for Aerospace Engineering at UCLAN), has agreed to present a talk on Demining in Cambodia. https://www.uclan.ac.uk/news/high-street-drones-help-cambodia-armed-forces.php. Billy asked when we want to hold it, Rebecca replied with suggested dates of 28, 29 or 30th January 2020. Billy said that they can host the event in the newly opened EIC (Engineering Innovation Centre).
**Action: Rebecca** to find out which date is suitable and book the room.
Rebecca suggested we ask if we can hold a future committee meeting at the new EIC at UCLAN. Paul Gardner reported that he has had a tour and that it’s an excellent facility.

**New Actions**

4.5 David Entwistle took and action to contact Microlight Aircraft Training to see if an event could be arranged.
This has been completed and the company was not keen on doing an event, but David decided that he will ask them again next year to see if they’ve changed their mind.

**Action Complete**

4.6 David Entwistle Took an action to make enquires regarding a lecture on Human Factors.
David reported that he had contacted Baines Simmons who seemed amenable to the idea of an event. David Entwistle suggested we hold this event in March. He took an action to confirm a date in March with Baines Simmons. UCLAN was suggested as the venue as Preston is easier to get to from down south.
**Action: David Entwistle to firm up speaker arrangements and timing.**

**Action Carried**

4.7 David Entwistle Took an action to draft a one page summary of the committee activities to be included in the November Lancashire Area newsletter. David has prepared a page of information for inclusion in the next Lancashire Area Newsletter; he reported that he would include an event write up of the recent Rolls-Royce visit.
David confirmed that the Newsletter is sent out twice a year, but not who it’s sent to.

**Action Carried**

4.8 David Entwistle to enquire about a visit to MBDA.
David Entwistle reported that he’d sent an email to MBDA in Bolton asking if we could have a tour, but that it was to a generic email, so he wasn’t that hopeful of a reply.
New Action: Rebecca Donald-Lopez took an action to find out if her brother in law has a contact, but that he works at MBDA in Bristol.

4.9 Thurai Rahulan took an action to make contact and establish feasibility of a lecture regarding Manchester Airport Upgrade Plans. Thurai has send emails to his contacts, however reported that it’s not looking good as his contact is retiring and he keeps getting past from one person to another. Action complete. TR to report back if he gets any replies.

Action Complete.

5 TREASURERS REPORT
Rebecca presented the finances on behalf of Manuel Donald-Lopez. Full details of accounts are given in appendix 2.

6 AEROSPACE DIVISION/HQ/REGION UPDATES
David Entwistle reported that he had attended the recent regional meeting in Kendal. He reported that the other committees seem to have similar issue to ours, such as: struggling for members.
David reported that Cumbria area recently held a Maritime day that they charged people £20 each for. David suggested we do something similar. The Avro Heritage Museum in Woodford was suggested as a venue.

7 EVENTS & ACTIVITIES PROGRAMME - 2019
The preferred day for events to be held is a Tuesday.

7.1 Airbus Broughton Visit - Event Review
Title: Airbus Broughton Visit
Date: 26th September
Venue: Airbus, Broughton
Time: 9:00am
Organiser: David Entwistle

18 people attended the visit, it was fully booked but 2 people didn’t turn up on the day. David reported that the tour was good, however some people thought it wasn’t technical enough. David suggested we run another visit next year, but to the A350 assembly line.

A discussion took place regarding the high amount of people who cancelled at short notice (both Airbus and Rolls-Royce visits) and it was decided that it would be a good idea if the event booking system could cater for a reserve list, in order that the reserves could be security checked in advance. Rebecca Donald-Lopez took an action to ask Kevin Manning if this is possible.

Action: Rebecca Donald-Lopez
7.2 **Rolls Royce Visit - Event Review**

Title: Rolls Royce Visit  
Date: 30th October 2019  
Venue: Rolls Royce Barnoldswick  
Time: 18:30  
Organiser: Andrew Medd

17 attended the Rolls-Royce visit, again fully booked but with last minute cancelations. The visit was fascinating and very well received by everyone attending and attracted excellent feedback. It was decided that we would like to repeat this visit if possible, at a similar time next year.

8 **EVENTS & ACTIVITIES PROGRAMME - 2020**

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

8.1 **Demining in Cambodia**

Title: Demining in Cambodia  
Speaker: Dr Darren Ansell, Aerospace Engineering Lead, UCLAN  
Date: 28/29/30 January 2020  
Venue: EIC, UCLAN  
Time: 18:00 for 18:30  
Organiser: Rebecca Donald-Lopez/ Billy Beggs


8.2 **Synthetic Jet Fuels**

Title: Synthetic Jet Fuels  
Speaker: Manuel Donald-Lopez  
Date: TBD January 2020  
Venue: Canberra Club, Samlesbury  
Time: 18:00 for 18:30  
Organiser: Manuel Donald-Lopez

8.3 **PHASA-35**

Title: PHASA-35 Solar HALE UAV  
Speaker: Paul Brooks, Prismatic MD  
Date: TBD February 2020  
Venue: Salford University, Room B2 Newton Building  
Time: 18:00 for 18:30  
Organiser: David Entwistle/ Thurai Rahulan

See action 4.3.

[http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West](http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West)
8.4 Human Factors

Title: Human factors
Speaker: Baines Simmons
Date: TBD March 2020
Venue: UCLAN
Time: 18:00 for 18:30
Organiser: David Entwistle

See action 4.6.

Other proposed events:

- Samlesbury ASK Facility Visit – could do this but is it of interest to people
- Clean Sky 2 - compound helicopter – is there a UK equivalent that we could get a speaker for
- Aero Gearbox International – Part of Rolls Royce and Safran, Alan Davies is a contact name volunteers to arrange lecture
- Manchester Airport Upgrade Plans – TR has emailed his contact
- Concorde & Son of Concorde – Next generation supersonic aircraft & Concorde Visit – volunteers to find speaker Nimrod replacement talk & visit – Aviation Viewing Park – volunteers to find speaker
- Aircraft de-icing – volunteers to find speaker
- New MBDA factory tour – DE has emailed MBDA

9 ANY OTHER BUSINESS

9.1 Event Attendee Records

Action: David Entwistle and Rebecca Donald-Lopez took an action to look at the event attendee records system and enter the attendee numbers for our recent events.

9.2 Laptop

David Entwistle asked about the whereabouts of the committee laptop and suggested we use it at meetings. Rebecca stated that Manuel collected it from Ivan and took an action to bring it to the next meeting. David also asked if we have projector.

Action: Rebecca took an action to find out. Since the meeting it has been determined that yes the committee does have a projector. Both lap top and projector were purchased predominantly as back up for events if either the venue or speaker didn’t have them. They have both been used for this purpose as well as educational events.
10 DATE OF NEXT MEETING

Monday 2\textsuperscript{nd} December 2019– at David Lloyd Club, Chorley, 18:15.

11 DATE OF PROPOSED IMECE COMMITTEE MEETINGS 2019

- Monday 2 December 2019

Minutes taken by:
Rebecca Donald-Lopez
Hon Secretary IMechE Aerospace North West
11th November 2019
### Appendix 1

**IMechE ANW 2020 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>28/29/30 Jan 2020</td>
<td>18:00 for 18:30</td>
<td>EIC, UCLAN</td>
<td>Demining in Cambodia</td>
<td>Dr Darren Ansell, Aerospace Engineering Lead, UCLAN</td>
<td>Rebecca Donald-Lopez/ Billy Beggs</td>
</tr>
<tr>
<td>TBD Jan 2020</td>
<td>18:00 for 18:30</td>
<td>Canberra Club, Samlesbury</td>
<td>Synthetic Jet Fuels</td>
<td>Manuel Donald-Lopez</td>
<td>Manuel Donald-Lopez</td>
</tr>
<tr>
<td>TBD Feb 2020</td>
<td>18:00 for 18:30</td>
<td>Salford University, Room B2 Newton Building</td>
<td>PHASA-35 Solar HALE UAV</td>
<td>Paul Brooks, Prismatic MD</td>
<td>David Entwistle/ Thurai Rahulan</td>
</tr>
<tr>
<td>TBD March 2020</td>
<td>18:00 for 18:30</td>
<td>EIC, UCLAN</td>
<td>Human factors</td>
<td>Baines Simmons</td>
<td>David Entwistle</td>
</tr>
<tr>
<td>TBD April 2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD May 2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD September 2020</td>
<td>07:00-15:00</td>
<td>Broughton</td>
<td>Airbus A350 line Visit</td>
<td>N/A</td>
<td>David Entwistle</td>
</tr>
<tr>
<td>TBD October 2020</td>
<td>18:00 for 18:30</td>
<td>Rolls Royce Barnoldswick</td>
<td>Rolls Royce Visit</td>
<td>N/A</td>
<td>David Entwistle/ Murat Islam</td>
</tr>
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</table>
## Appendix 2

Projected Expenditure for period January 2019 to December 2019

<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-18</td>
<td>End Balance from 2018</td>
<td></td>
<td></td>
<td></td>
<td>3477.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-19</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering and Mileage Claims</td>
<td>108.75</td>
<td>3368.58</td>
<td>66.50</td>
<td>3410.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb-19</td>
<td>Class of Ophir in Aerospace</td>
<td>Catering</td>
<td>250.00</td>
<td>2118.90</td>
<td>297.60</td>
<td>3110.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-19</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering and Mileage Claims</td>
<td>108.75</td>
<td>3004.83</td>
<td>134.05</td>
<td>2879.18</td>
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<tr>
<td>Apr-19</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering and Mileage Claims</td>
<td>108.75</td>
<td>2901.09</td>
<td>67.75</td>
<td>2833.34</td>
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<tr>
<td>Apr-19</td>
<td>I345 GEO Trials Lecture</td>
<td>Venue Hire and Catering</td>
<td>200.00</td>
<td>2701.08</td>
<td>188.00</td>
<td>2723.45</td>
<td></td>
<td></td>
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<tr>
<td>Apr-19</td>
<td>Blackburn Model Aircraft Club</td>
<td>Visitor Expenditure no cost</td>
<td>0.00</td>
<td>2701.08</td>
<td>0.00</td>
<td>2701.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-19</td>
<td>Regional Meeting</td>
<td>Mileage Claim</td>
<td>0.00</td>
<td>2701.08</td>
<td>63.00</td>
<td>2638.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May-19</td>
<td>Solar Halo Lecture</td>
<td>Venue Hire and Catering</td>
<td>400.00</td>
<td>2301.08</td>
<td>2000.00</td>
<td></td>
<td></td>
<td>Event did not occur in May</td>
</tr>
<tr>
<td>Jun-19</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering and Mileage Claims</td>
<td>108.75</td>
<td>2192.33</td>
<td>75.00</td>
<td>2094.43</td>
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<tr>
<td>Jul-19</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering and Mileage Claims</td>
<td>108.75</td>
<td>2083.58</td>
<td>80.50</td>
<td>2003.09</td>
<td></td>
<td>Solar Halo lecture not occurring in May has resulted in higher balance</td>
</tr>
<tr>
<td>Sep-19</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering and Mileage Claims</td>
<td>108.75</td>
<td>1974.83</td>
<td>57.00</td>
<td>1917.83</td>
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</tr>
<tr>
<td>Sep-19</td>
<td>Airbus Broughton Visit</td>
<td>Transport to event</td>
<td>400.00</td>
<td>1574.83</td>
<td>985.00</td>
<td>2061.83</td>
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</tr>
<tr>
<td>Sep-19</td>
<td>Airbus Broughton Visit</td>
<td>Charity Donation</td>
<td>100.00</td>
<td>1474.83</td>
<td>0.00</td>
<td>2061.83</td>
<td></td>
<td>Airline has not cashed Cheque yet</td>
</tr>
<tr>
<td>Sep-19</td>
<td>Airbus Broughton Visit</td>
<td>Ticket Sales</td>
<td>186.99</td>
<td>1664.82</td>
<td>2251.09</td>
<td></td>
<td></td>
<td>One person paid cash on the day so credit from HQ in bank account is 179.99</td>
</tr>
<tr>
<td>Sep-19</td>
<td>Airbus Broughton Visit</td>
<td>Transport Refunds</td>
<td>20.00</td>
<td>1644.82</td>
<td>2241.09</td>
<td></td>
<td></td>
<td>2 people have not cashed cheque yet</td>
</tr>
<tr>
<td>Oct-19</td>
<td>Regional Meeting</td>
<td>Mileage Claim</td>
<td>0.00</td>
<td>1464.82</td>
<td>40.50</td>
<td>2201.42</td>
<td></td>
<td>David Ennis paid 40.50 from IMechE bank account the other £16 will come from the Airbus visit ticket that was paid in cash to David on the day</td>
</tr>
<tr>
<td>Oct-19</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering and Mileage Claims</td>
<td>108.75</td>
<td>1836.07</td>
<td>2201.42</td>
<td></td>
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<tr>
<td>Nov-19</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering and Mileage Claims</td>
<td>200.00</td>
<td>1336.07</td>
<td>2201.42</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|               | Total Meeting Costs          | 961.25                               | 481.80         |                       |                      |                  |                                                                      |
|               | Total Events Costs           | 1250.00                              | 870.00          |                       |                      |                  |                                                                      |
|               | Total Equipment Costs        |                                     |                 |                       |                      |                  |                                                                      |
|               | Total Expenditure for Year   | 2211.25                              | 1552.40         |                       |                      |                  |                                                                      |
|               | Year End Balance             | 1239.07                              | 2201.42         |                       |                      |                  |                                                                      |
### Nat West Account Ledger

<table>
<thead>
<tr>
<th>Description</th>
<th>Credit</th>
<th>Debit</th>
<th>Running Balance</th>
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<tbody>
<tr>
<td>Opening Balance</td>
<td>£ 0</td>
<td></td>
<td>£ 3,477.33</td>
</tr>
<tr>
<td>January Committee Meeting</td>
<td>£ 66.50</td>
<td></td>
<td>£ 3,410.83</td>
</tr>
<tr>
<td>March Committee Meeting</td>
<td>£ 79.60</td>
<td></td>
<td>£ 3,331.23</td>
</tr>
<tr>
<td>Use Of Graphene In Aerospace Catering</td>
<td>£ 297.60</td>
<td></td>
<td>£ 3,033.63</td>
</tr>
<tr>
<td>Mileage Claim (J Soltan March Meeting)</td>
<td>£ 54.45</td>
<td></td>
<td>£ 2,979.18</td>
</tr>
<tr>
<td>Mileage Claim (D Entwistle April Regional Meeting)</td>
<td>£ 63.00</td>
<td></td>
<td>£ 2,916.18</td>
</tr>
<tr>
<td>April Committee Meeting</td>
<td>£ 67.75</td>
<td></td>
<td>£ 2,848.43</td>
</tr>
<tr>
<td>F35 Carrier Integration Testing room hire and catering</td>
<td>£ 188.00</td>
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<td>£ 2,660.43</td>
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<tr>
<td>June Committee Meeting</td>
<td>£ 76.00</td>
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<td>£ 2,584.43</td>
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<tr>
<td>July Committee Meeting</td>
<td>£ 80.50</td>
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<td>£ 2,503.93</td>
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<tr>
<td>September Committee Meeting</td>
<td>£ 57.00</td>
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<td>£ 2,446.93</td>
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<tr>
<td>Airbus Visit Transport</td>
<td>£ 385.00</td>
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<td>£ 2,061.93</td>
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<tr>
<td>Ticker Sales</td>
<td>£ 179.99</td>
<td>£ 179.99</td>
<td>£ 2,241.92</td>
</tr>
<tr>
<td>Airbus Visit Transport Refunds</td>
<td>£ 10.00</td>
<td></td>
<td>£ 2,231.92</td>
</tr>
<tr>
<td>Mileage Claim (D Entwistle Oct Regional Meeting)</td>
<td>£ 30.50</td>
<td></td>
<td>£ 2,201.42</td>
</tr>
</tbody>
</table>

**TOTAL**                                                          |        |       | £ 2,201.42      |
Appendix 3

Wish List of Future Events

- Microlights
- Human Factors
- Samlesbury ASK Facility Visit
- Uber Vertical Taxi
- Jet Suit – Richard Browning
- Clean Sky 2 - compound helicopter
- Aero Gearbox International
- Manchester Airport Upgrade Plans
- 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
- Maintenance
- Aircraft ducting
- Aircraft de-icing
- Aerodynamics
- Hawk hook on AC carriers
- Hawk systems into a new airframe
- Hot Air Balloon lecture possibly combined with Balloon Festival
- Hand Glider Material
- Woodford Flight Simulator – Oxford Aviation
- Aerial Survey/Google Maps
- New MBDA factory tour
- Space Tourism
- The Crash Detectives (book by Christine Negroni)
- Avionics Lecture
- Synthtic Jet Fuel