

AEROSPACE DIVISION YOUNG MEMBERS COMMITTEE 2025 IN REVIEW.

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**MECHANICAL
ENGINEERS**

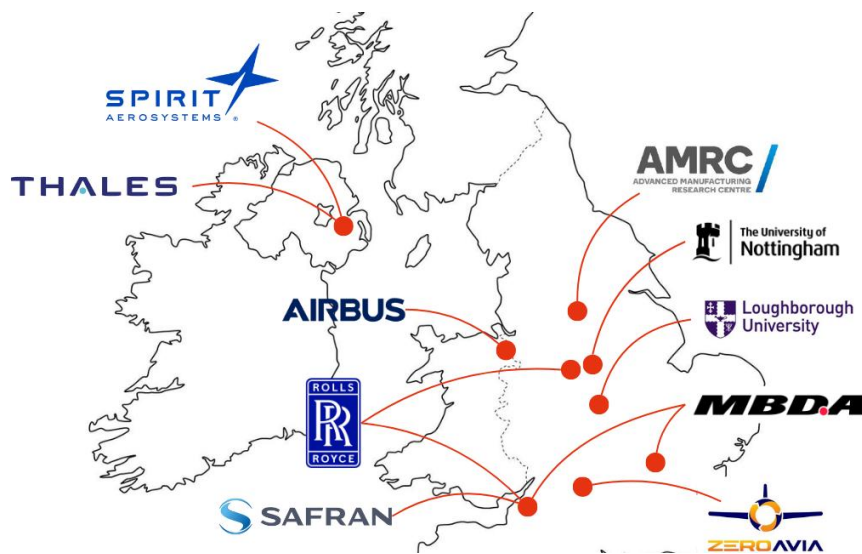


Improving the world through engineering

AEROSPACE DIVISION YOUNG MEMBERS COMMITTEE 2025 UPDATE

The Aerospace Division Young Members Committee (AeDYMC) has had a busy 2025! This year we took on 12 new members, conducted STEM outreach at the Royal International Air Tattoo (RIAT) airshow for the second year in a row, supported the IMechE Uncrewed Aerial Systems (UAS) Challenge, and kicked off many exciting new initiatives.

Recruitment has taken our active membership to around 20 young members from a variety of organisations across the UK, comprising of many different professional backgrounds within the aerospace industry.



Where our committee members are located across the UK

Committee chair Jack Mitchell-Divers commented on the AeDYMC's 2025:

"It has been a fantastic year for the committee. We've grown our membership, helping build a strong network of like-minded volunteers who are passionate about all-things aerospace. We've provided some high-quality outreach and support at events, particularly at the UAS Challenge and RIAT. It's also been great to see enthusiastic committee members contributing across the Institution – in technical activity committees, regional groups and engineering policy panels. I look forward to building on this momentum and working closely with the Aerospace Division board to connect more with young members across the industry."

This has been the busiest year yet for our committee and we are not slowing down. We're already planning our return to events like RIAT and the UAS Challenge so keep an eye on our LinkedIn page to make sure you don't miss us.

From the AeDYMC Communications Team

AEDYMC SUPPORTS UAS CHALLENGE FLY-OFF

The AeDYMC was proud to again support the IMechE UAS Challenge Fly-Off event, held at the British Model Flying Association centre in Buckminster. Several committee members including Shane Morris, Pranav Goyal, Alex Dobbins, Daniel James Rogers and Radhia Subratty volunteered throughout the Fly-Off, contributing to a wide range of activities.



The efforts of the team centred on engaging with student teams competing in the challenge to learn more about their projects and their impressive STEM outreach undertaken throughout the year. The committee also hosted a Young Members stall in the pit hangar, where they promoted the benefits of the Institution membership and highlighted the value of

volunteering with the IMechE as an early-career engineer. The volunteers had the opportunity to network with all the participants and have discussions around careers and opportunities within the industry surrounding the IMechE.

The UAS Young Member Lead Shane organised and co-hosted the social evening on the Wednesday evening which featured an engineering pub quiz filled with aerospace trivia with bonus rounds that made for an enjoyable yet informative evening.



The level of technical innovation, professionalism and teamwork demonstrated by the competing teams was exceptional, showcasing the true potential of the next generation of engineers. It was also a fantastic opportunity to connect with industry representatives, fellow volunteers and Institute members, all united by sharing a shared passion for advancing

aerospace capability and talent.

The AeDYMC was honoured to judge and present the Media & Engagement Award, a category that continues to showcase the breadth of outreach being delivered by teams across the competition. It was particularly encouraging to see how many groups had invested significant effort into meaningful STEM engagement, such as working with local primary schools, collaborating with universities, and participating in public events to demonstrate their UAS platforms. This



commitment to inspiring younger audiences and bringing engineering to life in accessible, hands-on ways reflects the very best of what the Challenge aims to achieve.

In addition to their outreach activity, the standard of social media engagement was exceptionally high. Many teams presented well-structured, professional-grade content that

clearly communicated their engineering journey while maintaining a consistent brand identity. Their ability to articulate complex technical work through polished videos, strong visual storytelling, and regular public updates highlighted not only their communications capability, but also their understanding of how modern engineering teams build presence and influence.

It was also a remarkable privilege to meet and interact with the highly diverse student teams who had travelled from around the world to participate in the 2025 competition. The winner, Team Bath Drones from University of Bath, stood out not just for their flying performance but for their impressive programme of technical development and outreach.



Beyond the champions, teams came from as far afield as China, Italy, Estonia and the Netherlands, each bringing unique approaches to UAV design, manufacturing, systems integration and mission planning. The breadth of design, from exotic VTOL tailsitter layouts to refined fixed-wing

setups, was testament to how global the event has become and how student ambition is reaching new heights.

Conversations with these teams revealed more than just their flight logs: we heard about how they are visiting primary schools, running workshops, attending local STEM events, and using their UAV builds as catalysts for inspiring future generations. Some described how they leveraged their social media presence, inviting younger students to follow their build-progress and learn about aerospace engineering in an accessible way. The AeDYM looks forward to contributing its support of the UAS Challenge, which remains a unique platform for students to take engineering beyond the classroom and into a challenging, real-world experiment.

STEM OUTREACH AT RIAT 2025



The Aerospace Young Members Committee spent this year's Royal International Air Tattoo inside the Techno Zone running a hands-on aerodynamics activity for families.

The set up was simple. Visitors folded paper aircraft, placed them in a small wind tunnel and watched how even small changes in shape affected the way they behaved. Children and parents kept trying new ideas,

whether it was a wider wing, a heavier nose or an unusual tail.

One volunteer mentioned that talking through the results was a good reminder of basic aerodynamics. "It was often the simple questions that were the hardest to answer, and there were a surprising number of them."



Next to us, volunteers from the University of the West of England were showing Project Renatus, a semi-monocoque carbon fibre unmanned aircraft that can fly autonomously. It was a useful contrast to the paper aircraft activity. You could see the same aerodynamic ideas but carried through to structures, sensors and a real airframe.

For the Young Members Committee, RIAT offered a good mix of public engagement and time around a wide range of aircraft.

The paper aircraft wind tunnel was busy throughout the day, the discussions around Project Renatus added depth and the flying displays offered constant reminders of how aerodynamic principles translate into real machines.



AEDYMC LAUNCHES INNOVATION COMPETITION FOR YOUNG MEMBERS

The AeDYMC has led the development of a new initiative to engage and award early careers with novel ideas to tackle complex engineering challenges across the aerospace industry. The 'Aerospace Young Members Innovation Competition' is due to be rolled out early 2026 and is firmly aligned with the Institution's strategic objective to *"enable and support members to effectively promote engineering, inform opinion, and stimulate innovation for the benefit of society."*

This competition has been shaped under the leadership of Radhia Subratty, who has overseen the programme's strategic direction, delivery model and operational governance. Radhia is supported by a working group, Sunny Joseph, Tanika Dodhia, Nicholas Leonard Garrido and Daniel Rogers, whose collaborative effort has ensured that the competition is both visionary and operationally robust, while maintaining the disciplined engineering ethos that underpins the aerospace sector.

The competition challenge is built around a central question drawn from the Aerospace Division's *Aero 2050 – Flying More Sustainably* paper: "How can commercial air transport and its supporting infrastructure be reinvented for a future where the required energy is supplied sustainably, without inflicting serious damage to the planet's environmental health?"

Entrants are invited to propose innovative solutions linked to one or more focus areas, including future propulsion, alternative fuel supply chains, energy distribution, emissions reduction, certification of new systems, and workforce skills requirements.

Submissions will take the form of a video presentation, allowing entrants to articulate their solution, discuss methodologies, evaluate feasibility, highlight challenges and present an implementation roadmap. Entries will be assessed across five equally weighted criteria: originality and creativity, feasibility, cost efficiency, sustainability and presentation quality.

The winning entrant will receive a £200 prize and will be invited to present their work at the Aerospace Division AGM, providing exposure to senior professionals and board members.

Ultimately, the Aerospace Young Member's Engineering Innovation Competition serves as a strategic platform for developing future leaders, individuals capable of coupling imagination with technical responsibility, and who can contribute meaningfully to shaping a sustainable, forward-looking aerospace sector.

It stands as a testament to the Institution's commitment to engineering development, and to empowering Young Members to drive impactful change across the industry.

COMMITTEE ACTIVITIES

In May, two of our members represented the AeDYMC at the Farnborough Sustainable Skies World Summit.



Laura Parkes and Jack Mitchell-Divers got to speak with several organisations about their research into sustainable aviation and partake in a workshop hosted by Boeing, demonstrating their interactive climate impact tool, cascade.

As well as attending workshops and valuable networking opportunities, Laura appeared on the new professional's forum panel, offering insights into the future of sustainable aviation.

This year we have appointed regional liaison representatives, Sunny Joseph in the Western Region and Muhallab Al Ismaily to the Aerospace Northwestern Centre. Sunny has built ties with the Bristol & Bath Young Members Panel, regularly promoting the IMechE at events hosted in the workplace, as well as reaching out to students and advertising the IMechE student affiliate membership. By attending regular meetings and events, Sunny has promoted the IMechE to potential new members. Muhallab has begun liaising with the Aerospace Northwestern Centre, with a view to regularly meet to identify where our committees can collaborate throughout next year.

Committee members, led by Rachael Andrews, are also preparing to pilot an exciting new design-build-fly challenge for secondary school pupils, developed in collaboration with the IMechE Event Operations team to inspire the next generation of aerospace engineers. More details on this expected in 2026!

Through the AeDYMC communications team, the division has increased its visibility, with an article published through the Professional Engineering digital platform highlighting student competitions and showcasing the work of young engineers. The communications team also now contributes regularly to the monthly Aerospace Industry Updates and the division's newsletter, helping to ensure members stay engaged and informed about developments across the sector.