



UK STUDENTS FOR THE EXPLORATION AND DEVELOPMENT OF SPACE

Stakeholder Update

Autumn 2021

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Contents

03 The last 6 months at a glance

04 The next 6 months at a glance

05 UKSEDS Board of Advisors, Committee, and other news

06 Membership

07 SpaceCareers.uk

08 Competitions

11 Projects & Opportunities

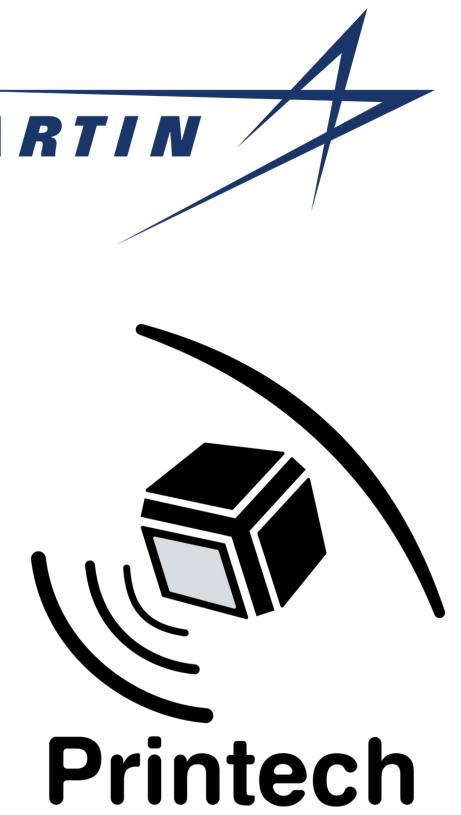
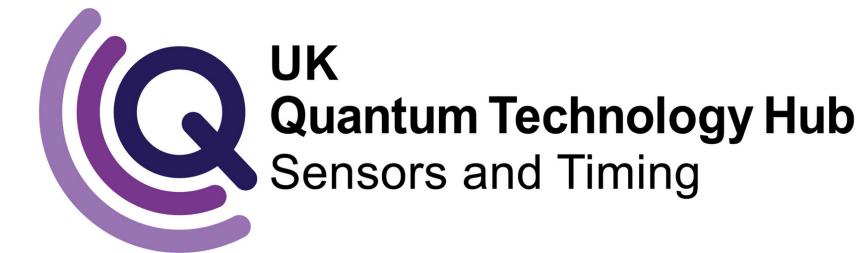
13 Events & Partnerships

02

CORNWALL **SPACE**



LOCKHEED MARTIN



A huge **thank you** to our Corporate Sponsors for their support this year!

The last 8 months at a glance...



x3
Tripled our volunteers in 1.5 years

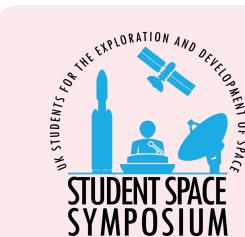
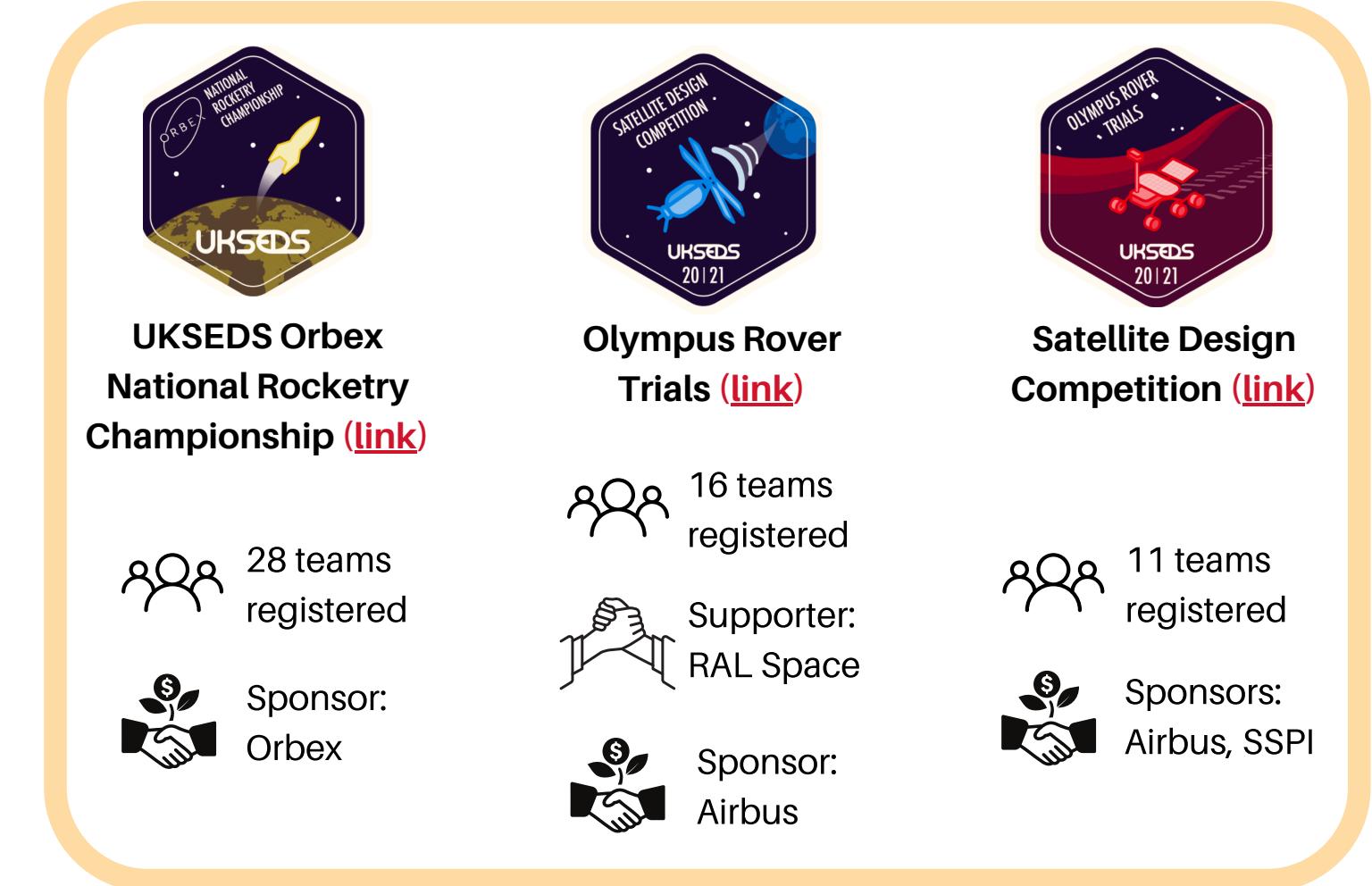
2198 2198 submission from 75 primary schools for our Space Jobs Challenge



Funded applications for **5 potential ESA astronauts**



SpaceProjects.uk has helped create **6 new projects** between universities and industry that started this October



2nd Student Space Symposium
9th October 2021
13 papers presented at virtual event



Terra_Nova Hackathon
15th - 17th October 2021
3 sustainability challenges, 55 participants

Upcoming Events:



Diversity in Space Careers

TBA 2022

Hybrid @ University of Birmingham

Reach out to disc@ukseds.org to get involved as a sponsor or speaker.



National Student Space Conference

5th - 6th March 2022

Hybrid @ Kings College London

Reach out to conference@ukseds.org to get involved as a sponsor or speaker.



SpaceBar

We have recently partnered with AstroAgency to deliver SpaceBar every month. Join us [here](#)

Reach out to spacebar@ukseds.org to get involved as a speaker.



Explore new ideas and get ahead in recruitment by supporting a student's degree project. Get in touch at spaceprojects@ukseds.org

The next 4 months at a glance...

Two New Competitions!

We're launching the [In-Orbit Servicing and Manufacturing Competition](#) and the [Mach-22](#) CanSat and Rocketry Competition



A big welcome and thank you to our new Board of Advisors!



Beat the competition to the best candidates on the leading early careers jobs board. Contact **promote@spacecareers.uk** to discuss our new promotion options

UKSEDS Board of Advisors, Committee, and Other News

This year, we wanted to start better recognising the amazing people that have been helping us continuously grow as an organisation. As a result, we're hugely delighted announce our new **Board of Advisors**, consisting of:

- Alex Marinova (First Steps Legal)
- Alfredo Carpineti (IFL Science)
- Daniel Smith (AstroAgency)
- Kathie Bowden (UK Space Agency)
- Harriet Brettle (Astroscale)
- Katherine Courtney (KCourtney BIS)
- Libby Jackson (UK Space Agency)
- Liz Seward (Airbus)
- Matthew Goodman (Ordnance Survey)

We are incredibly grateful for their help in the past, and continued support as official advisors.

We are also pleased to welcome Jessica Goldie as our new **Exec At-Large**, and thank Christina MacLeod for her work in the role from March 2021 up until now.

The Executive Committee is always keen to explore new ideas for projects, events, and support in the delivery of the work we do at UKSEDS. If you're interested in working with us, please get in touch at exec@ukseds.org

Membership

Our current stats:

1205	124	25
Members	Volunteers	Branches

This year, we've started a new initiative to strengthen our connections with our university branches by assigning four **Regional Coordinators** to different areas of the UK.

Our membership team is constantly working on new benefits and opportunities for our branches and members, including launching our new and improved **branch grants!** Reach out to membership@ukseds.org to find out more, get freshers packs for your members, be put in touch with other branches, and for help and advice.



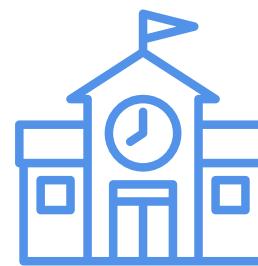


Over the last 8 months, our careers team have been focused on improving the diversity of people and jobs we cover on [SpaceCareers.uk](#)

In response to popular demand, we started a Career Change series of interviews and articles to show people of all backgrounds that a career in space is possible for them, and in response have seen a remarkable increase in enquiries.

We are constantly looking to improve the experience of all our platform users and are currently updating our website and its protocols. More updates to come soon, keep an eye on the website and our social media!

If you have any suggestions for content or events, please reach out to careers@ukseds.org



**14 School
articles**



**29 job
profiles**



**10 webinars
(3000+ views)**



**25 university
articles**



**75
interviews**



UKSEDS Orbex National Rocketry Championship

2020/21 ([link](#))

The addition of **Orbex** as our **title sponsor** enabled us to offer teams matched funding and more teams to take part this year. Teams who were able to build and launch continued as normal with the following additional challenges: a mandatory payload and bonus points for measuring the recovery distance from the launchpad. Those who were unable to build submitted an Extended Design Review with the following updated requirements: achieve an apogee as close to 1,000m as possible, include a payload with a mass of at least 200g, and incorporate GPS acquisition.

Four teams were able to build and launch their rockets, with the winner being **Project SunrIde from the University of Sheffield**, reaching an altitude of 1,474m, the third highest altitude ever recorded for this G-class motor in the UK. **Unspecific Impulse from the University of Birmingham** won the Extended Design Review category, with a very impressive and detailed report, all explained in [this video](#). Both teams will visit the Orbex facilities before the end of the year for a hot-fire engine test and their names will be engraved, alongside previous winners, onto our **new rocketry trophy**.

08



28 teams registered



Sponsor:
Orbex



Winners - Unspecific Impulse,
University of Birmingham



Winner - Project SunrIde,
University of Sheffield



Olympus Rover Trials 2020/21 ([link](#))

In addition to designing, building, and testing rovers capable of grabbing a cable, traversing rough terrain, and inserting the cable into a simulated power distribution unit, teams also had to identify and decode April tags. Bonus marks were awarded to teams who were able to include autonomy in their operations, replicating a more realistic Martian mission.

At our virtual competition day, teams were able present their work, network, and play a Mars rover-themed game created especially for the competition by 4wardFutures. **Southampton Spaceflight**, from the University of Southampton, were the overall winners, scoring highly in their reports, presentations, and prototype build (which you can see [here](#)), and winning a tour of Airbus' facilities. **CranSEDS**, from Cranfield University, picked up prizes for the best CDR and the best Prototype, and **Southampton** won the best Mission Design and Presentation. For their novel remote arm operations implementation, **TokaMars** from the UK Atomic Energy Authority was presented with the Innovation Award.

09



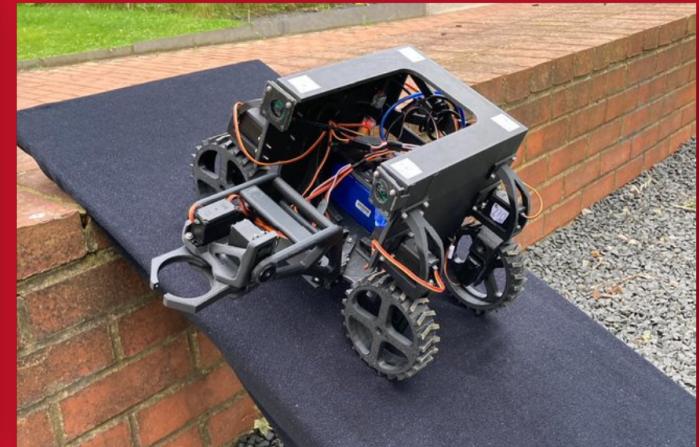
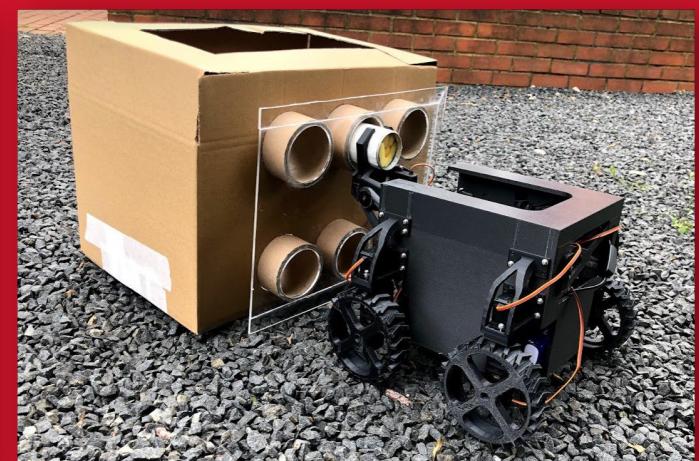
16 teams
registered



Sponsor:
Airbus



Supporter:
RAL Space



Winners - Best CDR and Best Prototype: CranSEDS, Cranfield University



Satellite Design Competition 2020/21 ([link](#))

Our fourth instalment continued with last year's theme and saw teams design a lunar CubeSat and a high-level mission. Teams opting to build and test their satellites were challenged with recreating the 'mystery room' simulating the lunar environment themselves, whereas teams working on the Extended Design Reviews had to adapt their designs to a more realistic lunar mission.

At the livestreamed competition day ([link](#)), five teams presented their designs. **Vicinity, from Cranfield University**, won the overall competition in addition to the best Critical Design Review, the best Technical Readiness Review, the best Presentation and the best Prototype, and will be joining the winning rover team for a tour of Airbus' facilities. **StrathAIS, from the University of Strathclyde**, was awarded the best Extended Design Review.

11 teams registered

Sponsors:
Airbus, SSPI

10



Overall Winners - Vicinity,
CranSEDS, Cranfield
University



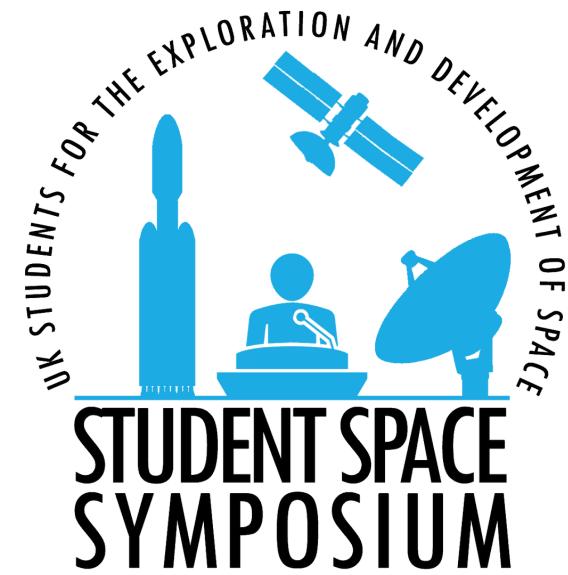
Events & Partnerships

2nd Student Space Symposium 9th October 2021

 Sponsors:
AstroAgency &
BryceTech

After the success of last year's event, the [Student Space Symposium](#) returned for a 2nd round!

The event gave students the opportunity to write and present a space-related paper, with the potential of being published in the Journal of the British Interplanetary Society. From all submitted abstract, 13 students were chosen to continue writing their papers, 8 of which were presented live at a virtual event.



Terra_Nova Hackathon
15th - 17th October 2021

UKSEDS' annual hackathon, [terra_Nova](#), returned virtually for its second year.

The theme of this year's hackathon was sustainability; the winning submissions for each challenge were showcased by UKSEDS at COP26, the UN's 2021 global climate summit, to demonstrate both the contribution of the UK to the UN's Sustainable Development Goals (SDGs) and the innovation of its students and young professionals.

A variety of challenges were on offer for students of all levels of technical ability, offering an interdisciplinary experience that anyone can take part in regardless of their background.

SpaceBar Monthly on Thursdays



We have recently partnered with AstroAgency to deliver **SpaceBar**, a semi-informal event, attended by 100+ space enthusiasts and professionals monthly on Thursdays at 7pm BST.

We run these events to allow people to network, while conversing about current (and sometimes controversial) topics. We've previously had Helen Sharman, Tim Peake, Dr Kevin Fong, Dr Lucy Roberts, and many others, while regularly co-hosted by Dallas Campbell and Dr Suzie Imber.

National Student Space Conference 5th - 6th March 2022



Our flagship event will return in-person at **King's College London**, while also being broadcast online on our custom-built platform! We will be taking precautionary measures to ensure everyone's safety, while allowing everyone to network and interact in-person once again.

This is the premier space event for any organisation to meet the most enthusiastic and up-and-coming student talent, with sponsorship packages to suit every budget and **entry-level sponsorship starting at £150**. Look out for the full details coming out soon!

Email us at conference@ukseds.org if you've never sponsored before and would like more details about our event.

Projects & Opportunities

13

Space Jobs Challenge

Students in Years 5 & 6 from [75 primary schools](#) wrote in 'applying' to be either an astrophysicist, an astronaut, a space chef, a space suit designer, climate scientist, or an engineer. This was to raise awareness of the variety of careers in the space industry, while also making the young people aware of the skills they already have and how they could apply them.

With [2198 submissions](#), choosing a winner was incredibly difficult! Every submission received in return a certificate for taking part, as well as advice on how to follow the path that they applied for.

[Oughtrington Community primary school](#) was the overall winner, receiving a [space-themed Q&A with Lucinda Offer](#) and two class sets of space books, courtesy of RAS.



**Space Jobs Challenge Overall
Winners** - Oughtrington Community Primary School

Student Space Essays Competition

Essay competitions are commonly run by universities to give students a chance to discuss interests that aren't catered for in the curriculum, while also proving their interest in a certain subject and giving them a taste of university work. Whilst still finalising the final details and timeline of the competition, the choice of essay title will be:

- Where should we explore in the Solar System next?
- Why should we fund space missions?
- Space debris - why is it a problem?



Aspiring Astronaut Bursary

UKSEDS has successfully selected and funded five potential future astronauts via our [Aspiring Astronaut Bursary initiative](#), which covered medical certificate costs for financially disadvantaged individuals applying to the latest ESA astronaut call.

They also had the opportunity to attend a personal CV workshop session provided by EVONA. We wish them all the best of luck in their applications!



Our [SpaceProjects.uk](#) scheme, in collaboration with SUN, provides the framework for students to do their final-year project remotely with a space company. SpaceProjects.uk was launched in March 2021, and is now supported by the [UKSA, ESA BIC UK, the Satellite Applications Catapult, and the South Coast Centre of Excellence in Satellite Applications](#).

The scheme has already set up five individual projects and one group project which have been taking place from October 2021 - giving students space experience before they graduate. If you're interested in having a student explore new ideas for you, at no cost, get in touch with us at spaceprojects@ukseds.org.

Diversity & Advocacy

Our Diversity team has been renamed to '[Diversity & Advocacy](#)' to reflect their role within UKSEDS more accurately, advocating to industry and academia for all students' needs. We have been collecting data for a new research paper which examines the 'leaky pipeline' between academia and industry, with the aim of producing a paper to be presented to key industry members of the space sector.

We will also be producing a series of workshops to cover important diversity related topics. Additionally, we've been trying to encourage more diversity in our competitions with the help of [Orbex's Gender Diversity Grant](#).