

UKSEDS PRESENTS,  
THE 34TH

A stylized white graphic of a planet with rings, partially obscured by the text. The planet is a semi-circle, and the rings are two thin, slightly tilted ellipses.

# NATIONAL STUDENT SPACE CONFERENCE 2022

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KING'S  
COLLEGE  
LONDON,  
5TH & 6TH OF  
MARCH 2022

**UKSEDS**  
UK STUDENTS FOR THE EXPLORATION AND DEVELOPMENT OF SPACE



In collaboration with KCL Space Society

THE NATIONAL STUDENT SPACE CONFERENCE  
IS ORGANISED BY



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Yurina Aratake, and Zhen Yuan



This conference has been put together by a team of volunteers, all students and recent graduates, over the last 6 months in their spare time outside of university, work, and personal lives.





# Welcome

I am delighted to welcome you, once again in-person, to the 34th edition of the National Space Conference, at King's College London.

We are always keen to bring together a diverse range of talks, panels, and opportunities, and this year is no different. We are proud to bring a record-breaking number of UK spaceports in a panel format to discuss the future of the launch sector in our country, as well as talks on space exploration, data, media, architecture, telescopes, and a series of workshops.

A huge thank you to our sponsors, without whom this event would not have been possible. Their continuous support aids UKSEDS in creating more opportunities for the next generation to join the space sector. I would also like to extend thanks to Airbus and Skyrora, who will be joining us as corporate sponsors for the year ahead, and to Inmarsat and Thales Alenia Space; all four of whom have made a large and greatly appreciated contribution to this event.

I am beyond proud of everything we achieved as an organisation this year, despite the pandemic still lingering and affecting our every day lives, and I cannot wait to see where the next Executive Committee will steer UKSEDS over the coming year.

Antonio Duduianu, Chair of UKSEDS

Follow us on social media to stay in touch, and don't forget to use the hashtag below throughout the day:

**#NSSC2022**



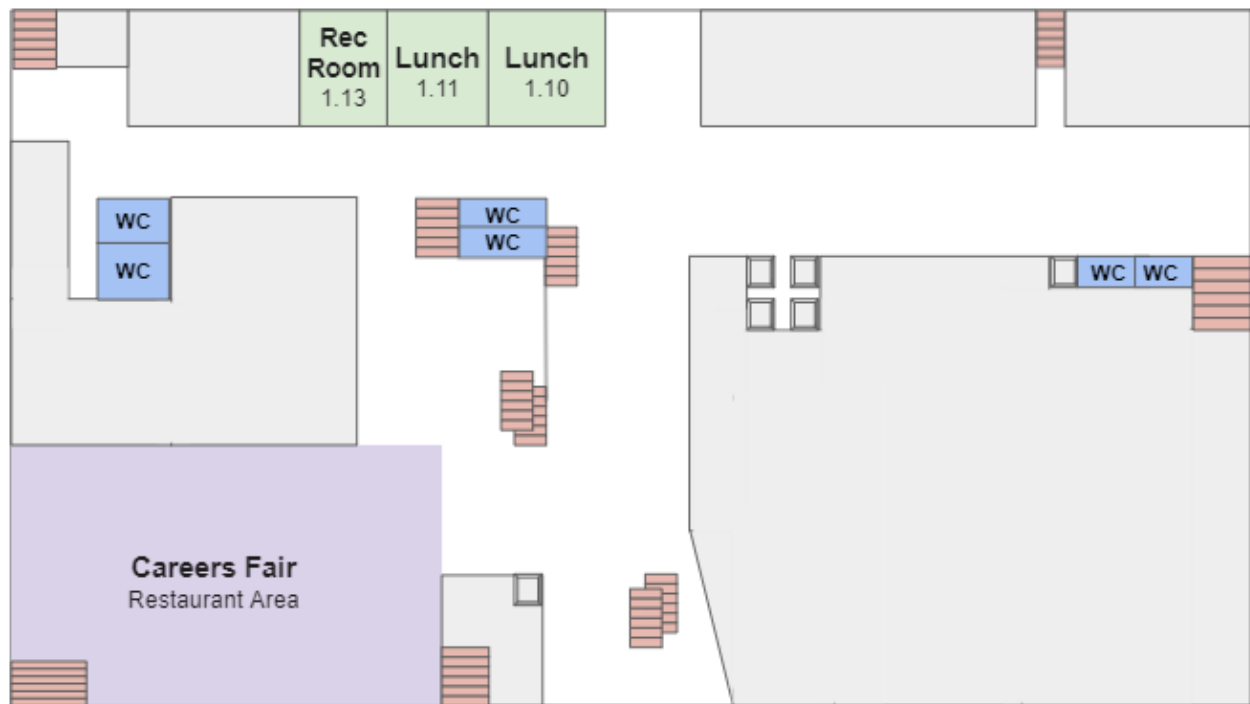
# Saturday Programme

	STREAM 1 - LECTURE THEATRE 1	STREAM 2 - LECTURE THEATRE 2
08:30	REGISTRATION & COFFEE RECEPTION	
09:00	<b>WELCOME &amp; OPENING</b> <i>Antonio Dudaianu &amp; Paul Bate</i>	
09:30	<b>BENCHMARK SPACE SYSTEMS</b> <i>Why take tanks?</i>	<b>AIRBUS</b> <i>2022 Airbus Student Space Competition Presentations</i>
09:40	<b>MARIA GRULICH</b> <i>Introduction to ISS Operations</i>	<i>Disruptive Technology - Space Debris Removal: Liam Donnelly (SSTARS - Small Space Trash Automated Removal System)</i>
10:10	<b>SKYRORA</b> <i>Skyrora: A Story of Environmental Launch</i>	<i>Exploration Mission - Ocean World Exploration: Lewis Clark (EUOM - Exploration of Uranus Ocean Moons)</i>
10:40	BREAK - SPONSORED BY IOP	
10:55	<b>BRIGHT ASCENSION</b> <i>"Bright Start: Spacecraft Software Academic Programme"</i>	<b>GMV</b> <i>Welcome to GMV</i>
11:05	<b>UK SPACEPORTS PANEL</b> <i>Ben Jarvis (SaxaVord), Victoria Montag (Machrihanish), John Paffett (Cornwall), John Whalley (Snowdonia), Mark Roberts (Spaceport-1), Peter Guthrie (Sutherland), Dr Matjaz Vidmar (Panel Host)</i>	<b>ROSA SANTOMARTINO</b> <i>Space Microbes: How the smallest organisms help us exploring space</i>
11:35		<b>HE SPACE</b> <i>Finding a job in space</i>
11:45		<b>CGI</b> <i>Interesting science onboard ExoMars to increase rover autonomy</i>
11:55	<b>RORY HOLMES</b> <i>Shaping Sustainability Beyond Earth</i>	<b>VERONICA ORLANDI &amp; LOÏC LERVILLE-ROUYER</b> <i>Asclepios - Analog Space Mission</i>
12:30	LUNCH - SPONSORED BY BRYCE TECH UKSEDS BRANCHES MEETING	
13:30	<b>KEYNOTE - KATY HASWELL</b> <i>Live at the Launchpad - A look inside the TV world of broadcasting rocket launches from the Guiana Space Centre</i>	
14:35	<b>CHRIS RILEY</b> <i>Spaceflight Stories</i>	<b>INMARSAT</b> <i>Space Systems Engineering at Inmarsat - it's not all about requirements</i>
15:00		<b>XAVIER DE KESTELIER</b> <i>Adventures of an Interplanetary Architect</i>
15:35	BREAK	
15:50	<b>SPACE FORGE</b> <i>ForgeStars: Making Super Materials in Space</i>	<b>UKSA</b> <i>The urgent issue of space sustainability</i>
16:00	<b>SPACE DATA PANEL</b> <i>Andrew Fournet, Guillaume Tanier, Stuart Gill, Jacob Geer, Zania Rahman, Ken Gordon</i>	<b>DR BETHANY JACKSON</b> <i>Using Earth Observation to support anti-slavery efforts</i>
16:30		<b>DR ANJANA KHATWA</b> <i>How to talk about rocks and influence people</i>
17:00	<b>AWARDS CEREMONY</b>	
17:30	RECEPTION - SPONSORED BY FIRST STEPS LEGAL	
18:00+	SOCIAL	

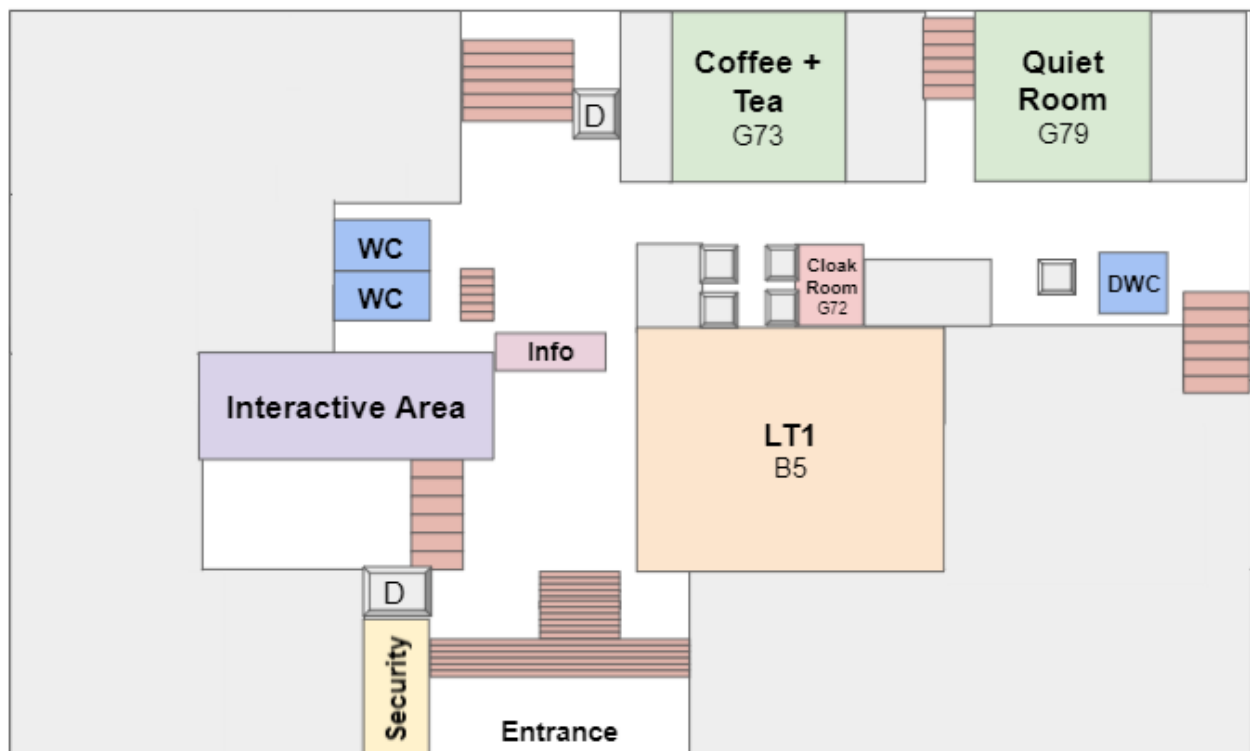


# Sunday Programme

	STREAM 1 - LECTURE THEATRE 1	STREAM 2 - LECTURE THEATRE 2
09.30	REGISTRATION	
10.00	<b>MATT DAVIES</b> <i>Leadership 101</i>	
10.35	<b>PROF MARK MCCAUGHREAN</b> <i>The James Webb Telescope - from first light to new planets</i>	<b>DR STEPHANIE YARDLEY</b> <i>Observing the Sun from space</i>
11.05		<b>ALI STICKINGS</b> <i>Space &amp; Defence: Security and strategy in orbit</i>
11.40	BREAK	
11.55	<b>STEAM PANEL</b> <i>Finn Strivens, Marta Zawadzka, Alexandra Sankova, Anna Talvi, Richard Hollingham</i>	<b>THALES ALENIA SPACE</b> <i>Space pollution - are we really going to make this mistake?</i>
12.20		<b>UKSEDS COMPETITIONS</b> <i>And Why You Should Get Involved - David Sulley</i>
12.35		<b>SpaceCareers.UK</b> <i>SpaceCareers.uk: An interactive talk to launch your space career - Joanne Oliver</i>
12.45		<b>SpaceProjects.UK</b> <i>SpaceProjects.uk: Matching Students and Industry - Jacob Smith</i>
13.00	LUNCH - SPONSORED BY REACTION ENGINES	
13.30	<b>ARTS WORKSHOP</b> <i>In groups, students will explore different future scenario and their implications on the world around us. At the end of the session groups will come back together to share some different insights into the future of Lunar mining.</i>	<b>DETINA ZALLI</b> <i>How to Succeed in STEM Career with a focus in Space</i>
14.00		<b>DEBORAH SASS</b> <i>Democratising space, we are Space Hero</i>
14.30	<b>FISTRAL WORKSHOP</b> <i>Take Charge of Your Time and Reduce Burnout - Dr Rosie Doyle</i>  <i>The seminar will cover:</i> <ul style="list-style-type: none"> <li>• Goal-setting to create focus for work</li> <li>• Prioritising multiple demands to maintain focus on what's truly important</li> <li>• Taking charge of each week to make sustained, manageable progress</li> </ul>	
16.00	<b>UKSEDS ANNUAL GENERAL MEETING</b>	

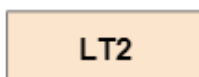


**FIRST FLOOR**



**GROUND FLOOR**

Across the street





## Venue Locations

Talks will be split between B5 (Lecture Theatre 1) in the main building and Stamford Street Lecture Theatre (Lecture Theatre 2) in the building across the road.

The careers fair will be split between the restaurant on floor 1 and the conservatory on the ground floor, both connected by a set of stairs and a close-by lift.

## Saturday Evening Social

It is tradition for us to hold a social event after the first day of the Conference. It is a chance for all to relax and have a good time. Join us at the KCL SU, the Vault.

## Social Media

You are encouraged to post about the conference on social media. Please use the hashtag #NSSC2022.

## Internet Access

If you are a student you should be able to connect to Eduroam using your own university login. Alternatively, you can use the university's free guest wi-fi.

## Emergency Contacts & Procedure

In the unlikely event of an emergency, follow the instructions of the UKSEDS team. The fire assembly point for the buildings used during the Conference is Notre Dame - Waterloo Bridge Wing; exit through the main exit and turn right. You can contact 07792 967 708 (Antonio) or 07484 748 527 (Zaria) at any time during the conference. In an emergency, ring 999. The university's emergency number is 020 7848 2222.

## Breakout Room

The Conference is an action-packed weekend, with long days and lots of people and talks. We understand that sometimes you might need a bit of peaceful space. To that end, we've allocated a breakout room G79 where you can go for as long as you like to have some peace and quiet. Please just knock on the door before you go in, to let anyone in there know that someone is entering, and be respectful of others sharing the room.

There is also a recreational room 1.13 you can use on floor 1 if you just want to meet other delegates and hang out away from the rest of the conference.

## Refreshments

Tea and coffee will be served at break times and at the morning coffee reception in G73, but please ensure to clear the drinks stands and not crowd the room if already full to ensure everyone's access to refreshments.

Lunch packs will be provided on floor 1 in rooms 1.11 and 1.10. Once you have your lunch pack, we ask that you take your food to rooms 1.10, 1.11, the recreation room 1.13, or to any designated seating area around the venue. Please do not bring any food or drinks into the lecture theatres.

If you require any further food and drink, there is a Costa across the road from the venue and a local Sainsbury's only a 5 minute walk away.

## Photos & Filming

Our photographers and videographers will be taking photos and videos throughout the weekend, and the lectures will be live-streamed and recorded. If you don't wish to be in any photos, please make our registration desk aware. You are welcome to take photos yourself, and we'd be very grateful if you'd share them with us, as we're always on the lookout for good publicity shots. Please check before you take photos of other delegates.

## Code of Conduct

We want this event to be safe and inclusive for everyone. We expect all attendees to abide by our code of conduct, accessible at [ukseds.org/ukseds-event-code-of-conduct](https://ukseds.org/ukseds-event-code-of-conduct). We also expect all attendees to abide by our COVID policy for the duration of the event, wearing their face masks at all times unless eating, drinking, presenting, or exempt.

## Coloured Lanyards & Wristbands

Attendees will be issued white lanyards, UKSEDS volunteers will be issued red lanyards, and speakers/sponsors will be issued black lanyards.

We're aware that many of our attendees may be cautious of large gatherings and as such have implemented a wristband system to indicate preferences towards social distancing:



"I'm keeping my distance"



"Ok with talking but no physical contact"



"Ok with talking and hand shakes"

# Saturday

## REGISTRATION + COFFEE RECEPTION

08:00-09:00



## WELCOME & OPENING

09:00-09:30 LT1

Join Antonio Duduianu, Chair of UKSEDS and Paul Bate, CEO of UK Space Agency in opening the 34th National Student Space Conference.



## BENCHMARK SPACE SYSTEMS

09:30-09:40 LT1

"Why Take Tanks?"

Mark Arthur will be representing Benchmark Space Systems with his talk "Why Take Tanks?", which will explore the benefits of an ensured plan to have propulsion in your mission and the importance of having End of Life De-orbit capability.

Mark is Director of European Operations responsible for managing the day-to-day engagements within the UK and Europe for Benchmark Space Systems. Mark has 20+ years of experience working in the space sector and across the spacecraft mission lifecycle, with previous roles including spacecraft operations at EUMETSAT, Project Manager on multiple RF payload technologies and as a Test Development Manager on Communications at Airbus, and multiple Navigation and Earth Observation missions. He also previously worked at Raytheon UK in Business Management, subsequently on to become Head of Engineering at Clyde Space where he worked to develop the Engineering capability to deliver complex systems and satellites to market.





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# Saturday



**MARIA GRULICH**  
**09:40-10:10 LT1**  
"Introduction into  
ISS Operations"

For over 20 years we have had astronauts constantly surrounding us in space, with international collaboration as the key to the operation of the ISS. This lecture will give you a basic overview of how we perform science in space, with focus on European payloads and the European Columbus module, and showcase how uncertainties in space are handled.

Maria grew up in Hanover, Germany and graduated with an M.S. in Aerospace Engineering in 2016 from the Technical University of Munich, Germany. She spent one semester at ISAE SUPAERO in France and wrote her master's thesis at the Florida Institute of Technology in the USA. After her studies she worked for two years for the European Space Agency (ESA) in ESTEC in the Netherlands as a Young Graduate Trainee. Currently she is working at the German Aerospace Center (DLR) in Cologne, Germany as an ISS payload operations engineer for the BIOLAB rack, inside the European Columbus module, and MSL, an ESA payload inside a NASA rack of the destiny module (U.S. lab).

Her tasks are to prepare, test and be on console for the onboard execution of new experiments, such as the recent CYTOSKELETON experiment to support the astronauts. Part of her work is to support new biological experiments from the operations point of view and to be on console as part of the Flight Control team for maintenance and experiment operations of BIOLAB. For MSL she is working closely with the NASA counterparts to perform material science in space.



**SKYRORA**  
**10:10-10:40 LT1**  
"Skyrora: A story of environmental launch"

Skyrora's environmental launch story, as well as the company's plans for contributing to the sustainability of the UK space industry for the benefit of life here on Earth, will be discussed. The connection between Net Zero Earth and Net Zero Space will be explained, followed by insight into how Skyrora is contributing to the global goal of reaching Net Zero by 2050 through the development of cutting-edge space technologies. The talk will conclude with personal stories from Skyrora interns and full time staff detailing how they became involved with the Space industry.



Nickie Finnegan is a recent International Business Management and Music graduate of Heriot-Watt University and The Australian National University. Through her exposure to global business environments, she has gained a unique perspective on the Space sector and developed key analytical, digital marketing, and editorial skills. Nickie is currently a Business Communications Officer at Skyrora Limited, where she is responsible for developing the company's external image through the curation of media campaigns, press releases, and external events.



Molly Mitchell-Knight is a Business Intern at the Skyrora headquarters in Edinburgh. She joined Skyrora on their 2021 Summer Internship Programme and since then has continued working with the company whilst completing the final years of a master's degree in MEng Product Design Engineering. Molly has been passionate about working in the space sector since a young age and, despite studying engineering, has a keen interest in the work carried out by the business team in a fast-paced, exciting industry environment like Skyrora.





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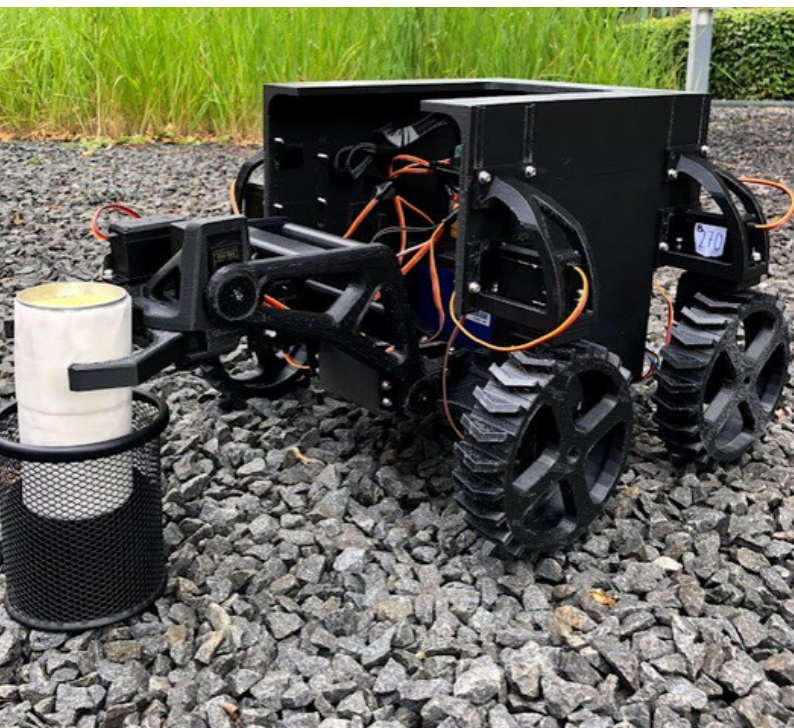


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# Saturday



**AIRBUS**

**09:30-10:40 LT2**

## "2022 Airbus Student Space Competition Presentations"

Airbus would like to welcome you to the finale of our two student space competitions. The two presenters here with us today have faced three rigorous rounds of reviews and have been selected from a pool of 35 high calibre students to present innovative solutions on Space Debris Removal and Ocean World Exploration. The event will start with an introduction from Airbus graduates and experts on the importance of the chosen topics for the future of the space industry, followed by presentations from the two finalists and reception of the competition prizes.

David Gaudain will be representing Airbus. David graduated from ESTACA space system engineering school in France followed by an advanced master at ISAE-Supaero. He later joined the SEEDS Program and worked on the definition of a manned lunar outpost using ISRU methods to produce propellant in order to support human and robotic exploration. After an Airbus Defence and Space placement within Mars Sample Return – Earth Return Orbiter team, he joined the site of Portsmouth and is now working on the reliability of telecommunication and earth observation payloads. Aside from his technical activities, David is involved in UniCOM, the Airbus outreach association, and leads the student competition team.



Michael Skreta will also be representing Airbus. Michael graduated from the University of Bristol with a Masters in Aerospace Engineering, and joined Airbus Defence & Space on the Graduate Development Programme in January 2021. As part of his core work, he works on site in Stevenage in the Future Payload Products team on the design of future telecomms payload processors to support next generation communications networks. Aside from his technical work, Michael chairs the Airbus university outreach organisation to deliver social value to local communities and ensure a strong talent stream into Airbus.



Also presenting is Ciarán Jenkins, a young professional spacecraft systems engineer who is passionate about innovation and technology in the space sector. Ciarán is also the founder of the Strathclyde Aerospace Innovation Society and former co-ordinator of 'STRATHcube', Strathclyde's student CubeSat initiative.



**BREAK - TEA & COFFEE**  
**SPONSORED BY IOP**  
**10:40-10:55**

**IOP** Institute of Physics

# Saturday



## BRIGHT ASCENSION

10:55-11:05 LT1

"Bright Start: Spacecraft software academic programme"

Shannon McDonagh will represent Bright Ascension, Shannon is a Java engineer at Bright Ascension with a strong background in the space industry. Discover Bright Start: Bright Ascension's Academic Programme, designed to support the student community with free and heavily discounted licences for its innovative component-based space software, which supports quick, efficient and cost-effective mission development and operation. Join us to learn more about the programme, how to join and how Bright Start can help boost your satellite project.



## GMV

10:55-11:05 LT2

"Welcome to GMV"

Presenting on behalf of GMV is Mark Dumville, CEO of GMV NSL Limited, who will be giving an introduction to GMV including the business, our team, our values and employment opportunities prior to this role, Mark was co-founder and General Manager of Nottingham Scientific Limited (NSL). NSL was a UK SME that specialized in the development of Position, Navigation and Timing (PNT) technologies. In 2020, NSL was acquired by the GMV group. As part of the acquisition process, GMV merged their existing UK operations with NSL to form GMV NSL. Mark was offered and accepted the position of CEO of the merged enterprise. Mark has a BEng in Civil Engineering and a PhD in Satellite Geodesy.



## ROSA SANTOMARTINO

11:05-11:35 LT2

"Space Microbes: How the smallest organisms help us exploring space"

Microorganisms are everywhere on Earth's biosphere, from extremely hot volcanic springs to the human body. These tiny fellows will necessarily follow us as we explore space. Indeed, they will be crucial to our survival beyond Earth, as they play many important roles here.

Rosa will explore the possible roles of microorganisms in space, with particular mention to space biomineralization by bringing as an example her current research, including two experiments performed on board the International Space Station. This research allowed to learn more about how microorganisms could support humans in the establishment of space settlements, how to could keep the process sustainable, and how to apply this knowledge to terrestrial applications

Dr Rosa Santomartino is a researcher in Space Microbiology and Astrobiology at the University of Edinburgh (UK). She studies how microbes react and behave in space conditions, and how to use this knowledge to support human space exploration and its sustainability. During her research, she performed two biology experiments onboard the International Space Station: BioRock in 2019 and BioAsteroid in 2020/2021. The focus of her future research will be on waste recycling in space. During her research, she worked at NASA, Stanford University (California, US), Université Claude Bernard Lyon 1 (France), "Sapienza" University of Rome (Italy) and UNAM (Mexico). She currently collaborates with the European Space Agency (ESA) and the Italian Space Agency (ASI).





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# UK Spaceports Panel

**11:05–11:55 LT1**

The addition of Launch Sites and Spaceports to the UK will bring with it new career paths, innovative technologies, and a revitalised UK space industry. It is a very exciting time, especially for students and graduates seeking opportunities within this sector. This panel brings together the industry experts to discuss what the construction of UK Spaceports mean for the future of the space sector, and the challenges, opportunities and environmental impacts that come with them, along with some key tips about how you can get involved.

## **Dr Matjaz Vidmar (Panel Host)**

Dr Matjaz Vidmar is Lecturer in Engineering Management at the University of Edinburgh. His background is in Physics and Astronomy (BSc Hon), Science and Technology in Society (MSc) and he holds PhD in Science and Technology Studies on organisational learning and innovation processes within high-tech domains focusing on New Space industry.

His research is examining new product development, intermediation, innovation networks, entrepreneurship and futures design. He is working in particular with the satellite and space data sectors and artificial intelligence.

## **John Paffett**

John Paffett is managing director of KISPE, a specialist project engineering, system design and implementation company working in the space, telecommunications and electronics industries. He is also the founder of Applied Space Solutions Limited a company focussed on the provision of space related analytics, applications and services, business partner of US specialist training company Teaching Science and Technologies Inc, and Commercial Director of Spaceport Cornwall.

An advocate for driving the sustainable use and application of space, he has proven engineering, management, strategic, business and business development skills, with a track record of working with international space industry partners in securing new business opportunities and delivering complex projects.

## **Mark Roberts**

Mark Roberts is the Defence and Security lead for RHEA Group in the UK, and the Project Director for Spaceport 1, developing a vertical launch capability in the Outer Hebrides. Before moving into the commercial world, Mark was in the Royal Air Force, where he was an operational pilot and commanded both 12 Squadron and RAF Lossiemouth.

Mark was Director of the Air Staff in MoD (2007-2010) with Space and Cyber Policy in his portfolio, and Head of Capability Deep Target Attack, with responsibility for Combat Air, Complex Weapons, Land Engagement and elements of the Queen Elizabeth class carrier programme.





**Dr Matjaz Vidmar**



**John Paffett**



**Mark Roberts**



**John Whalley**



**Ben Jarvis**



**Victoria Montag**



**Peter Guthrie**

**PANEL HOST**



## John Whalley

John Whalley is the CEO of Aerospace Wales and co-chair of Space Wales Leadership Group. 50 years in and around the aerospace, aviation and space sectors. 20 years as an executive/divisional director with British Aerospace/BAE Systems. In partnership with Welsh Government, established Aerospace Wales Forum, twenty years ago as the representative body for aerospace, aviation, defence and space in Wales.

Established and co-chairs the Space Wales Leadership Group and is co-author of "Wales - a sustainable space nation". Working closely with a range of partners including the Welsh Government, Snowdonia Aerospace, Jacobs, Spaceflight Academy, Space Forge, B2Space and others to develop and implement the business strategy for Spaceport Snowdonia.

## Ben Jarvis

Ben has been involved in rocket launch for over thirty years as an amateur, an educator and a professional. Having launched over one thousand six hundred of his own rockets over his career Ben is now working as Launch Campaign Manager for the SaxaVord UK Spaceport in the Shetland Islands and aspires to bring access to hands-on launch activities to all UK students in order to help close the space sector skills gap.

## Victoria Montag

Vicky is a director at, and the Chairman of Discover Space UK. She has spent her career in science and technology, from education to research and development to the manufacturing space. She has a BSc in Physics and was a science tutor at Bridgwater College before moving to the National Physical Laboratory as a research scientist.

She has over a decade of aerospace project management experience and is a manager at UK Launch Services consultancy. Vicky is a member of BSi Committee ACE/O68 for standardisation on Space Systems and Operations and sits on the DfT sponsored Spaceflight Safety and Regulatory Council.

## Peter Guthrie

Peter Guthrie is the Head Project Manager of the UK Vertical Launch Space Programme managed by Highlands and Islands Enterprise. The programme is primarily focused on creating a vertical launch spaceport in Sutherland on the A'Mhoine peninsula, which has just obtained planning permission from Highlands and Islands Council.

Peter has enjoyed a wide-ranging career in public service. This has included deploying superfast broadband to some of the most remote communities in Scotland, redeveloping a military museum and building new Theatres and Cinemas. For the past three years, he has looked after the "Space Hub Sutherland Project", which will see Scottish built satellites launched from the North Coast of Scotland by UK-based launch provider Orbex next year.

# Saturday



## HE Space

11:35-11:45 LT2

"Finding a job in space"

The space sector has evolved dramatically in the last twenty years with many companies serving the sector with various commercial and/or research-focused roles. As such there are many opportunities now for a career in space. Presenting on behalf of HE Space, Jason Maroothynaden will talk about what types of jobs exist, where the jobs are, and about getting an interview.

With 20 years in the aerospace business, Jason is UK Director for HE Space Operations Ltd. HE Space today is a leading recruiter and service provider, providing the best people for institutional and industry customers in the space sector. Jason studied at Imperial College London and finance from Oxford University. He started his career as a bio-instrumentation engineer at ESA/ESTEC. He left space and became an internationally experienced venture builder. In 2017, he came back to Europe and the space sector and started working at ESA/ECSAT as a business broker where he spent a lot of time with start-ups and facilitated access to finance, particularly working in partnership with Venture Capital and Business Angel funds.



## CGI

11:45-11:55 LT2

"Interesting science onboard ExoMars to increase rover autonomy"

The ExoMars rover will communicate with Earth via Trace Gas Orbiter over quite a few million kilometres once it reaches Mars. This means there will be a significant lag in communication; in the order of minutes. I will be talking about some of the interesting algorithms used onboard the rover that provide it with more autonomy, enable an efficient sample analysis and improve the usage of telemetry downlink capacity.

Rida E Zainab is a Flight Software Engineer working on European Space Agency's ExoMars rover and Solar wind Magnetosphere Ionosphere Link Explorer at CGI. Some of her work involves the implementation of complex scientific algorithms to increase the autonomy of the Mars rover leading to more efficient telemetry bandwidth usage. She is also a STEM ambassador and believes in raising awareness about opportunities in the space sector, especially through different career paths.



## RORY HOLMES

11:55-12:30 LT1

"Shaping sustainability beyond Earth"

Shaping Sustainability Beyond Earth – how can we mitigate the problem of debris and ensure that space remains viable for future generations.

Rory has over 13 years experience in the space industry, leading numerous advanced development programs at SSTL, COM DEV, Honeywell and OneWeb. He has now turned his attention to space debris and in-orbit services and leads ClearSpace's rapidly-scaling UK subsidiary.





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# CGI



# Saturday



**VERONICA ORLANDI + LOÏC LERVILLE-ROUYER**

**11:55-12:30 LT2**

**"Asclepios - Analog Space Mission"**

The Asclepios project is a program of analogue missions designed by students for students, under the mentorship of trained professionals. This interdisciplinary project unites students and scientists from all around the globe to achieve a common goal: successfully perform "do-it-yourself" space missions. It seeks to simulate short-term space missions on other celestial bodies, such as the Moon or Mars, thus paving the way to the future space exploration of our solar system.

In this talk Veronica and Loïc will present the Asclepios missions to the public, highlighting the importance of organizing an international and student-centred analogue space mission!



**VERONICA ORLANDI**

Veronica's bio: Veronica Orlandi is doing a Master in Physics at EPFL, with a Minor in Space Technologies. She finished her Bachelor in Physics at EPFL in 2020. She attended her high school studies in Milan with a double diploma EsaBac in Italian and French.

Space has always been her passion, and she has attended numerous workshops and space conferences throughout her years of studies. She is currently the Project Leader and President of Asclepios.



**LOÏC LERVILLE-ROUYER**

Most of the people reading this will probably have a young story with Space but Loïc's one is recent. He joined Asclepios 2 years ago following his fascination for the beauties of the sky but didn't do much space-related research before.

He is now a 21-year-old Master's Student in Biomedical Engineering, thriving to make his contribution to the great advances Space research has to offer. He strongly believes that one of the first steps is through Analog Missions; a reflection of what life could be out there, here on magnificent planet Earth.



**LUNCH  
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12:30-13:30**

# Keynote: Katy Haswell

**13:30-14:35 LT1**

"Live at the Launchpad - A look inside the TV world of broadcasting rocket launches from the Guiana Space Centre"



Katy Haswell is a journalist and TV presenter who is passionate about space. On Christmas Day 2021, she co-hosted NASA & ESA's live coverage of the James Webb Space Telescope launch from the Guiana Space Centre, where she is a regular, presenting live shows during rocket launches and Astronaut launches from Mission Control, Moscow.

The ESA and NASA host will talk about how she went from reading the news to presenting rocket launches, and what it's like to work as a TV journalist and presenter at the Guiana Space Centre alongside Mission Controllers and the operational teams. A useful talk for anyone interested in the media aspect of the space industry.

Katy started her career as a BBC Radio news reporter and went on to anchor the news on BBC, ITN and London Tonight. She has journeyed the world presenting travel shows such as CNN's Artclub and the Globetrekker Pilot Guides.





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# Saturday



**CHRIS RILEY**  
**14:35-15:35 LT1**  
**"Spaceflight Stories"**

Writer and filmmaker Christopher Riley talks about how he's connected audiences with spaceflight, over a lifetime of storytelling on cinema, TV, SVOD and social media screens and even the Washington Monument in D.C., for a unique Apollo 11 fiftieth anniversary commission for the Smithsonian's National Air and Space Museum.

From his Sundance Award-winning feature documentary "In the Shadow of the Moon", to his hit YouTube Yuri Gagarin experiential film "First Orbit", and his latest Mars project "World's Apart" - Riley reflects on some of his career highlights.

Christopher Riley is a writer and filmmaker that specialises in science, engineering and history. He has directed and produced more than thirty documentary films for the BBC, Film4, Netflix, National Geographic, The Discovery Channel and the Smithsonian, and has written and directed commercial shorts and branded content for HSBC, Vodafone and architects Foster + Partners.

  
**inmarsat**



**INMARSAT**  
**14:35-15:00 LT2**  
**"Space systems engineering at Inmarsat - it's not all about requirements"**

People think Systems Engineering is purely about managing requirements. Yes, this is an important part, but to be able to develop and manage requirements you need to really understand the system you are designing and engage with stakeholders. By using Simulation and Modelling tools, you can bridge that gap and ensure that everyone across the board has that system-level understanding.

George Newton will be representing Inmarsat. George graduated from Cranfield University in 2019 with an MSc in Astronautics and Space Engineering and now works as a Senior Systems Engineer at the world-leading global, mobile satellite communications company, Inmarsat. His work predominately focuses on the GNSS market, and he has worked with the UK Space Agency to define new navigation capabilities for the UK.

George specialises in the modelling and simulation of systems to enable rapid system concept definition and validation. In his spare time, George leads the UKSEDS Olympus Rover Trials competition and enjoys flying light aircraft around the UK and Europe.



# Saturday



## XAVIER DE KESTELIER

15:00-15:35 LT2

### "Adventures of an Interplanetary Architect"

How will we live elsewhere in the solar system? On Earth, natural resources for creating structures are abundant, but sending these materials up with us to the Moon or Mars is clunky and cost-prohibitive. Enter architect Xavier De Kestelier, who has a radical plan to use robots and space dust to 3D print our interplanetary homes.

He will be sharing his current projects and collaborations with NASA, ESA and Sierra Space envisioning new forms of human habitation in space.

Xavier is Head of Design at international design practise Hassell, where he leads design technology and innovation across all disciplines and regions. For the last decade, Xavier has been an industry leader in the field of parametric design, digital fabrication and additive manufacturing. Prior to joining Hassell, he was Co-head of Foster+Partner's internal research and development team where he worked on the Apple Headquarters, Kuwait and Beijing Airports, Yachtplus and the NBK Headquarters.

## BREAK - TEA & COFFEE

15:35-15:50



*Image Credits: Hassell*





# Saturday

**SPACE  
FORGE**



## **SPACE FORGE**

**15:50-16:00 LT1**

**"ForgeStars: Making Super Materials in Space"**

The way that we manufacture things on Earth doesn't make sense. Gravity, a dense atmosphere, and consistent temperatures around the world are not useful for manufacturing operations. Although in-space manufacturing has been around since the Apollo days, the infrastructure required to maintain large scale manufacturing in space has been lacking - until the ForgeStar orbital vehicle. With it, Space Forge is bringing the benefits of space back down to Earth, with the potential to revolutionise industries all over the world. This talk will explore the benefits of looking to space for solutions on Earth, as well as why the next industrial revolution is in space.

Presenting on behalf of Space Forge is Andrew Bacon. Andrew is the Co-Founder and Chief Technology Officer of Space Forge Ltd, a Welsh company building reusable satellites for in-orbit manufacturing of new super materials. He has previously worked in the advanced concepts team for Thales Alenia Space UK designing low flying satellites and building future Mars landing systems. He has previously run the MARSBalloon school outreach programme and was co-lead on the Space Generation Advisory Council's Near-Earth Object working group. Andrew was the recipient of the 2010 Engineering Graduate of the Year award.



## **UKSA**

**15:50-16:00 LT2**

**"The urgent issue of space sustainability"**

The UK Space Agency's lead for space sustainability will discuss why space debris and orbital congestion is becoming a key topic for governments, agencies, academics and companies around the world. This will include a summary of UK efforts to accelerate national and international action on space sustainability.

Jacob Geer is the lead for the UK's national activity to combat space debris, and is currently head of space surveillance and tracking at the UK Space Agency. He is an experienced policy and project leader within the UK civil service and has experience working between the defence and space sector.





# SPACE FORGE

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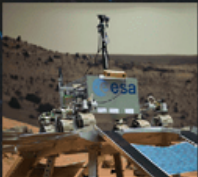
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one million  
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# Saturday



**DR BETHANY JACKSON**

**16:00-16:30 LT2**

**"Using Earth Observation to support anti-slavery efforts"**

This talk will focus on the application of remotely sensed Earth Observation (EO) data to support in-country antislavery efforts in line with Sustainable Development Goal (SDG) target 8.7. This will focus on the measurement and environmental intersection methods that we are using to investigate modern slavery at the Rights Lab (University of Nottingham) – one of the leading research groups addressing modern slavery globally.

This talk will include examples of the work we have been undertaking on the topic, covering modern slavery risks in sectors including brick manufacturing, aquaculture, mining and forests.

Dr Bethany Jackson is a Senior Research Fellow in the Rights Lab's Ecosystem and the Environment Programme. Her work focuses on the application of remote sensing and mixed-methods to investigate the connections between modern slavery, environmental degradation and climate change. Her work has encompassed a number of sectors, including fish-processing, aquaculture, fishing, forests and agriculture; focusing on a number of exploitative labour typologies such as forced labour and forced marriage. Her current interests lie in the investigation of the nexus in forest environments, and she has an interest in the ethical implications of using such data to investigate modern slavery.



**DR ANJANA KHATWA**

**16:30-17:00 LT2**

**"How to talk about rocks and influence people"**

How do we help people of all backgrounds engage with the extraordinary story of our planet? Over the past 20 years, Earth Scientist and presenter Dr Anjana Khatwa has travelled the world in search of remarkable rocks that reveal the deep history of our Earth. She will reveal some of the places she loves and the techniques she uses to help people fall in love with the hidden stories of rocks under our feet.

Anjana has worked as a learning and engagement professional in the natural heritage sector for over twenty years. For 15 years she developed and managed the education and learning programme for the Jurassic Coast World Heritage Site. She now works as the Engagement Lead for Wessex Museums where she creates strategic change to bring historically excluded audiences into four partner museums.

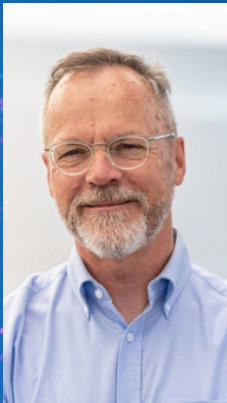
Anjana has been a powerful leader in raising the profile and accessibility of geosciences to audiences of all backgrounds through policy work but also on television as an expert contributor and presenter for over 12 years. She has worked tirelessly throughout her career to raise awareness and create systemic change to address the lack of diverse faces in green spaces. In recognition of her work, Anjana has been awarded the Royal Geographical Society Geographical Award, Geological Society of London R.H. Worth Award and also the National Diversity Award for Positive Role Model in Race, Faith and Religion. She has also been longlisted for the prestigious Nan Shepherd Prize 2021 for underrepresented voices in Nature Writing for her book proposal entitled The Rock Whisperer.



# Space Data Panel

**16:00-17:00 LT1**

Join our panel of leading thinkers, dreamers and makers at this year's expert summit, and learn more about the importance of data in the space industry.



**Ken Gordon**  
**PANEL HOST**



**Zaina Rahman**



**Guillaume Tanier**



**Andrew Fournet**



**Jacob Geer**

The UK Space Industry represents £16Bn of industry for the UK and it is not all about manufacturing and launching satellites. Around 13% of the UK satellite industry is satellite operators and almost 10% is processors of satellite data, satellite communication services and uses of satellite signals and data. With even more businesses and agencies using data produced from space missions and their operations. This space data panel brings together experts from different areas of this sector, users of payload data, analysts of payload data, telecommunications users and the data produced by space companies when manufacturing and operating satellites. This panel will cover some of the areas of space data you may not have previously heard about and will discuss and expose the range of the space data industry from across the UK and the future of the sector.



### **Ken Gordon (Panel Host)**

Ken Gordon is the ESA Space Solutions Business Ambassador for Scotland, Northern Ireland. For the last 15 years he has been helping organisations understand and apply for UK and EU funding to do innovative things.

His previous experience includes managing design teams focussed on the aerospace, explosives, automotive and consumer sectors, managing EU innovation programmes and as a bid writing consultant. In his spare time, he paints, makes podcasts, performs improvised comedy and is learning mandarin. Not in that order.

### **Zaina Rahman**

Zaina Rahman is a Graduate Engineer at the European Space Agency, where she is working in the Space for 5G and 6G strategic program line. She is supporting collaboration across the world to integrate satellite to 5G terrestrial networks. She has studied Mathematics and Physics and has a master's degree in Advanced Mechanical Engineering with Aerospace.

She is a STEM mentor to young students and is involved with promoting diversity in sports. Zaina is a public speaker and has presented her work at United Nations COP26, ESA Open Day and Edinburgh Women in Space Conference.

### **Jacob Geer**

Jacob Geer is the lead for the UK's national activity to combat space debris, and is currently head of space surveillance and tracking at the UK Space Agency. He is an experienced policy and project leader within the UK civil service and has experience working between the defence and space sector.

### **Andrew Fournet**

Andrew is Astrosat's Innovation Lead working on bright ideas and making them happen.

Half Scottish / half French, born and bred in Paris, Andrew likes riding his motorcycle and wine, usually not at the same time.

### **Guillaume Tanier**

Guillaume is the co-founder & CEO of Leanspace, a fast-growth startup to build the first cloud platform for space missions.

Guillaume spent the last 12 years in the space industry, developing and commercialising software products for mission operations, spacecraft design or space data management. Prior to Leanspace, he graduated from ISU and worked at Thales, NASA, Airbus, CGI and Telespazio, which led him from software engineer to outstanding business leader.

Guillaume has worked with space agencies, enterprises and newspace startups around the globe, ranging from satellite operators to launch providers and software suppliers. His deep knowledge of the space market and his broad experience in software development, product management and space innovation made him today a recognized expert in the digital transformation of space infrastructures



# Sunday

REGISTRATION: 09:30-10:00



**MATT DAVIES**  
**10:00-10:35 LT1**  
**"Leadership 101"**

Leadership lessons for those in the early stages of their career (and a few things that the rest of us have learned and forgotten!)

Matt Davies is an executive coach and leadership consultant who specialises in developing great leaders and engaged teams. Having spent a decade and a half in financial services, he left to set up his own consultancy in 2021. In his spare time, he coaches football and American Football and is both Head Coach of the Scotland u19 and Assistant Head Coach of the GB Mens Senior American Football teams.



**MARK MCCAUGHREAN**  
**10:35-11:40 LT1**  
**"The James Webb Space Telescope –  
from first light to new planets"**

Join Professor Mark McCaughrean as he explains the scientific rationale behind the astonishing James Webb Space Telescope, launched on Christmas Day 2021, as well the technological challenges that had to be overcome to make it a reality. Learn more about its current status and the scientific breakthroughs that JWST promises when it enters full operation later this year!

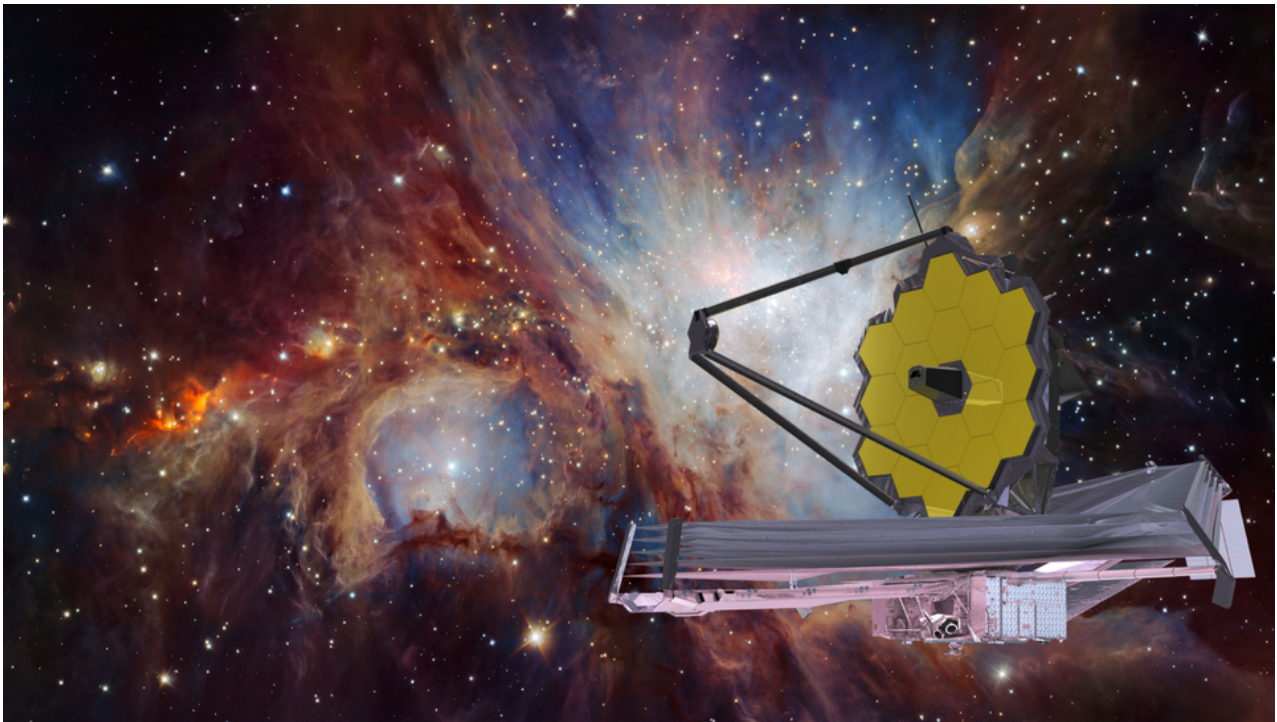
Professor Mark McCaughrean is the Senior Advisor for Science & Exploration at the European Space Agency. He is responsible for communicating results from ESA's astronomy, solar system, and exploration missions to the scientific community and the wider public. He studied and worked in the UK, US, and Germany before joining ESA in 2009. His scientific research focuses on the formation of stars and their planetary systems, and he is an Interdisciplinary Scientist for the NASA/ESA/CSA James Webb Space Telescope.



*Image Credit: Mark McCaughrean*

He is also the co-founder of Space Rocks, which celebrates space exploration and the art, music, and culture it inspires.





*Image Credit: Mark McCaughrean*



## **STEPHANIE YARDLEY**

**10:35-11:05 LT2**

### **"Observing the Sun from space"**

Stephanie will be discussing how we observe the different layers of the Sun's atmosphere using space-based instrumentation and how we can use these observations to understand and predict solar activity. Eruptions from the Sun upon arrival at the Earth can produce beautiful displays of the aurora but they can also lead to hazardous space weather conditions, which poses a significant threat to our technological systems.

Stephanie is a postdoctoral research fellow in space weather based at UCL's Mullard Space Science Laboratory. Her research focuses on the evolution of the Sun's magnetic field in the lead up to solar eruptions and the release of solar energetic particles. Solar eruptive events can lead to spectacular displays of the aurora but also pose a severe radiation risk to crewed space flight severe and cause significant disruption to our technological systems on Earth.



## **ALI STICKINGS**

**11:05-11:40 LT2**

### **"Space and Defence: Security and strategy in orbit"**

Ali Stickings is Space Strategy Lead at Frazer-Nash Consultancy, where her role includes business development and project delivery across the space, defence and government sectors. She was previously Research Fellow for Space Policy and Security at the Royal United Services Institute.

Her expertise includes military space programmes, space warfare, counterspace capabilities, space situational awareness, arms control and the intersection of space and missile defence. She has published widely, regularly provides expert commentary to the media and is a frequent speaker at international conferences.





# SPACE FOR LIFE

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SUSTAINABLE LIFE ON EARTH.



# Sunday

**BREAK: 11:40 – 11:55**



## **THALES ALENIA SPACE**

**11:55-12:20 LT2**

**"Space pollution - are we really going to make this mistake?"**

Space has always been, and is still considered a frontier for mankind. But today it is also a resource from where essential services are provided for the benefit of humankind. But there is growing pressure on near-Earth space because of 50 years of launches without sufficient consideration of space as a precious resource. The potential consequences will be increasing difficulty in the future and it is clear that we can't continue like this. The main challenges to overcome are in improving our knowledge of objects, international regulation on behaviours and a change to a more sustainable model for the use of space. Thales Alenia Space is a leading space company exploring how to achieve a more sustainable future.



Business Development Manager Stewart Hall joined TAS UK in 2019 to help develop UK business beyond the existing perimeter. Stewart is a Chartered Engineer (Software) with the British Computer Society, holding a Bachelor of Engineering (Hons) in Systems and Systems Engineering from the University of Portsmouth.



Propulsion Engineer Tim Peterson joined TAS-UK in 2020, and has worked on Pre-Phase A to Phase E on a mixture of ESA/NASA science missions and commercial telecommunications satellites. Tim previously worked at QinetiQ and CERN, and holds Master's degrees in Aeronautical Engineering and Astronautics/Space Systems Engineering from Durham University and Cranfield University.



## **UKSEDS COMPETITIONS**

**12:20-12:35 LT2**

**"UKSEDS competitions and why you should get involved"**

UKSEDS has run three core competitions, Rocketry, Rovers, and Satellites for many years to help hundreds of students develop their skills and join the space industry. 2021 saw UKSEDS launch two new competitions, In-Orbit Servicing and Manufacturing and the Mach 22 CanSat competition. Last year, despite pandemic restrictions, the competitions saw over 150 students complete. Presented by UKSEDS Competitions Lead, David Sulley, this talk will highlight the work seen of the competitions teams over the years, and explore why you should get involved.

David was a member of the winning team in the UKSEDS Satellite Design Competition in 2018/19 and joined UKSEDS as a Satellite Competition volunteer in March 2020. He graduated in 2021 from the University of Leicester in Space Exploration Systems and has a BEng in Aerospace Systems Engineering from Coventry University. He works as a graduate Engineer for the UK Civil Service.

# STEAM Panel



**Richard  
Hollingham**  
PANEL HOST



**Finn  
Strivens**



**Marta  
Zawadzka**



**Anna  
Talvi**



**Alexandra  
Sankova**

**11:55–13:00 LT1**

Finding the STEM and Arts Nexus – Building the STEAM movement. Space art ranges from hard-edged graphic arts realism to fine art abstractionism. Regardless of the style, good space art illuminates the special excitement, mystery and attraction of the cosmos.

## **Finn Strivens**

Designer, researcher and foresight practitioner who is passionate about empowering people to shape their collective futures. Finn is an NGFP fellow, and the inaugural winner of the NGFP Walkabout Prize where he is using arts based approaches including social media to engage young people to think about the future. He has previously worked on projects to involve young people in thinking about lunar mining, martian habitation. Finn is also a visiting lecturer in Global Innovation Design at Imperial College London and is founder and creative lead at Futurall, a design studio specialising in producing large scale participatory futures engagements. He is a regular public speaker at foresight conferences such as Primer, Futures Festival, and the Global Foresight Summit, and has previously completed Masters degrees in Global Innovation Design and in Biochemistry.



## Marta Zawadzka

Inspirational artist whose background and study in architecture and design translates into a dynamic canvas. Her works can be seen in galleries, exhibitions and art fairs around the world. Marta has been seen in British Vogue, The World of Interiors, the Khaleej Times, and Die Welt, and has worked with brands such as Samsung and Grolsch.

The media of fluorescent paint, acrylics and spray paints in her work bring to life icons from the world of art, sport, film, music as well as inspirational leaders of our time.

## Anna Talvi

Currently pursuing a PhD at the UCL, Bartlett School of Architecture, in partnership with the European Space Agency. Her interdisciplinary research focuses on developing a 4-dimensional microgravity-specific astronaut's body mapping and a topological framework to predict the mechanical behaviour of knitted structures for next generation space suits.

Talvi is also the founder of Microgravity Technologies, a startup developing technology for automated generation of knit instructions for 4D CNC-knitted structures.

## Richard Hollingham (Panel Host)

Multi-award-winning science and environment journalist, Richard is an experienced radio producer and presenter. He is a feature writer for BBC Future, presenter of the Space Boffins Podcast and a reporter and launch commentator for the European Space Agency.

Richard is a former Senior Producer for BBC's flagship news programme, Today, and its first science producer. He has reported from around the world for the BBC, including Antarctica (twice), Libya, Vietnam, Russia and the top of a missile silo in Kazakhstan. He is the author of popular science books on space dogs as well as the history of surgery.

## Alexandra Sankova

General Director and founder of the Moscow Design Museum, which was established in 2012 with the mission to collect, preserve, and promote the design heritage of Russia.

The exhibitions she curated and co-curated at the museum include Soviet Design 1950–1980 (2016, 2017), Packaging Design. Made in Russia (2013), and Discovering Utopia: Lost Archives of Soviet Design (2016), which received the Utopia Medal at the London Design Biennale 2016, History of Russian Design 1917–2017 (2017, 2018), The Design System in the USSR and many others.

She founded the non-profit organisation New Graphics, which organized exhibitions and educational events with international experts in Russia, and was Senior Advisor for Cultural Affairs at the Embassy of the Kingdom of the Netherlands in Moscow.

She is the author of 23 (IndexMarket, 2010), a collection of interviews with Russia's pre-eminent designers, Soviet Space Graphics. Cosmic Visions from the USSR (Phaidon, 2020), and a co-author of Designed in the USSR: 1950–1989 (Phaidon, 2018), VNIITE - Discovering Utopia (Unit Editions, 2018), documentary Design territory. The Netherlands (2014), documentary History of Russian Design (2018). Alexandra Sankova received her Master of Arts degree in Graphic Design from Stroganov Moscow State University of Arts and Industry.



## The UK needs you!

The UK's space sector is growing fast and is in desperate need of smart people to fill thousands of new jobs every year.

Space technology affects almost every part of our lives from farming to fundamental physics. A career in the space industry could include any of these areas and much more. You could be:

- ★ Designing a new probe to track solar flares
- ★ Making new discoveries about distant planets
- ★ Using satellite data to study pollution
- ★ Connecting the world's most remote communities
- ★ Helping aid agencies reach disaster zones
- ★ Enabling ships to navigate dangerous waters
- ★ Working on something that doesn't even exist yet!

## Interested?

There's no single route into the space industry.

If you're good at maths, science, or IT, get a degree and you could be a scientist or an engineer.

If you're more the hands-on type, go for an apprenticeship and assemble satellites in a clean-room.

If you're torn between being a doctor and being an astronaut, take a look at space biomedicine.

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*"Individual and group projects are some of the most important opportunities for learning skills that will be invaluable in the workplace, and this is even more powerful linked to a real industry problem. We are excited to work with SpaceProjects.uk to support students in preparing for employment and answering the biggest challenges facing the industry today."*

Andrew Bacon, Co-Founder and CTO at Space Forge

Find out more and get involved at SpaceProjects.uk



# Sunday



**LUNCH**  
**SPONSORED BY REACTION ENGINES**  
**13:00-13:30**



**SpaceCareers.uk**  
**12:35-12:45 LT2**  
**"SpaceCareers.uk: An interactive talk to launch your space career"**

This talk will cover general tips and tricks on how to land experience in the space sector, whether that's work experience, placement opportunities, further education, or jobs after university.

We will also discuss the resources available on SpaceCareers.uk, and the opportunities that will help connect you with employers and professionals working in the sector.

Presenting on behalf of SpaceCareers.uk is Joanne Oliver. Joanne is a MSc Psychology Graduate who volunteers as a Business Analyst for SpaceCareers.uk and UKSEDS while working full time as a Research Executive at Madano. She works closely with the amazing volunteers in the UKSEDS careers team on the redevelopment of the careers website to expand the resources of SpaceCareers.uk and the opportunities it provides for students and young professionals, enabling them to connect with the space sector and find job opportunities.



**SpaceProjects.uk**  
**12:45-13:00 LT2**  
**"SpaceProjects.uk: Matching Students and Industry"**

During their degree, students have to complete a lengthy individual and/or group project, and space-related topics are rarely available. Space employers often highlight a lack of skilled graduates, and students, a lack of opportunities to get experience, so the SpaceProjects.uk scheme was created to provide students with an opportunity to gain space experience before they graduate by matching them with a space company for their degree project. This presentation will outline how the scheme works, the benefits to both students and companies, how they can get involved, and an overview of the successes to date and plans for the future.

Presenting on behalf of SpaceProjects.uk is founder, Jacob Smith. Jacob created SpaceProjects.uk to provide university students with space experience before they graduate by linking them with industry for their degree projects. He is also managing the redevelopment of SpaceCareers.uk, to provide an updated service tailored to the needs of employers and job hunters. Before this, Jacob was Chair of UKSEDS, a position in which he oversaw the provision of opportunities and resources for students across the UK to engage with the space community, learn about the sector, and develop key skills. Jacob is a Graduate Engineer at SSTL and has an MSc in Astronautics and Space Engineering from Cranfield University.

# Sunday



## **ARTS Workshop**

**13:30-14:30 LT1**

Led by Finn Strivens, in groups, students will explore different future scenarios and their implications on the world around us. At the end of the session groups will come back together to share some different insights into the future of Lunar mining.



## **DR DETINA ZALLI**

**13:30-14:00 LT2**

**"How to succeed in STEM Career  
with a focus in space"**

Dr Zalli earned her PhD in University of Leicester, UK. Her research focused on NIMA (Never In Mitosis Gene A)- Related Kinase 8 mutated in the human cystic kidney disease nephronophthisis. Dr Zalli carried her postdoctoral research training at the Harvard School of Dental Medicine where she focused on podosome patterning in Osteoclasts and Bone Resorption In Vivo and In Vitro. Following her postdoctoral training at Harvard, Dr Zalli worked as lecturer where she directed multiple courses for graduate students in cancer cell biology in collaboration with world-class scientists in cell biology. She was also the director of Advanced Graduate Preclinical and Clinical Research Seminar and the director of Biotech Journal Club.

Influenced by the President of United States, Barack Obama, at Harvard, Dr Zalli joined Harvard Professional Government where she led multiple important events such as Harvard Lectures That Last and Harvard Leadership Conference. Dr Zalli later moved at the University of Oxford where she was the academic lead for MSc course in Precision Cancer Medicine and collaborated with Nobel Prize Winners. Dr Zalli is also the Co-founder of We Speak Science, a non-profit institution, the aim of which is to increase awareness of science with a focus in space and medicine in the USA and Europe. Through We Speak Science, Dr Zalli co-founded the charity called "Aferdita Ime", in collaboration with other world-class oncologists and scientists whose aim is to help cancer patients through psycho-social support and counselling.





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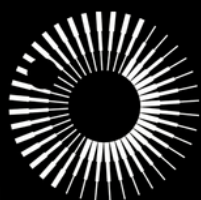
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**UKSEDS**  
UK STUDENTS FOR THE EXPLORATION AND DEVELOPMENT OF SPACE

# Sunday



## DEBORAH SASS

14:00-14:30 LT2

"Democratising space, we are Space Hero"

Deborah Sass is a seasoned entertainment industry executive with a unique global perspective on doing business in today's ever-interconnected world. She is a member of the World Economic Forum representing the Global future council on space. Deborah engaged formally with the Space Industry in 2016 as a Founding Partner and Co-CEO of Space Hero, the first worldwide movement aiming to democratize Space through a biennial global competition creating the first opportunity for a non-astronaut, non-billionaire to go into Space.

Throughout the years she has worked with some of media and technology's biggest names, including Mirror Group Newspapers, The Times Newspapers in the UK and Channel 9, 7 & 10 in Australia. Before embarking on her TV pursuit, she also worked in radio at both 96 FM & 2GB in Australia. After returning back to the UK she secured roles working with all things Digital & Entertainment with clients such as Amazon, iTunes, Shazam and Spotify. While working within the Entertainment Tech industry, Deborah has structured many international strategic partnerships with global brands, developed profitable business relationships with key stakeholders and helped raise capital. She is also a co-founder of 500FemaleFounders.



## FISTRAL TRAINING & CONSULTANCY LTD

14:30-16:00 LT1

"Take charge of your time and reduce burnout - workshop"

Work (academic or industrial) can be overwhelming due to the quantity of the work and the difficulty in planning work that is unfamiliar and lacking clear boundaries. Plus, with so many opportunities, it can be easy to take on too much and end up overcommitted. This short interactive seminar introduces three simple techniques to help take charge of work and make sustained progress while minimising the chance of burnout.

The seminar will cover:

- Goal-setting to create focus for work
- Prioritising multiple demands to maintain focus on what's truly important
- Taking charge of each week to make sustained, manageable progress

Since 1993 Rosie has worked with organisations designing and delivering training, research, consultancy and 1:1 coaching. Previously working at Sheffield Hallam, St Andrews and Edinburgh Napier Universities, she specialises in Team Working, Communication, DiSC® Behavioural Profiling, Leadership, Resilience and Motivation.

Since 2013 she works with Fistral developing and delivering a suite of courses specifically aimed at Space Operations staff: spacecraft controllers (ISS, Galileo), preparing for launch (LEOP) and technical officers within ESA. Courses include: Team Management and Leadership; Professional Communication; Influencing; Leading Teams in Challenging Circumstances; Time Management; Decision-Making in Stressful Circumstances and The Effective Teamworker.



# UKSEDS AGM

**16:00-17:00 LT1**

In addition to talks and exhibitions, the National Student Space Conference (NSSC) hosts the UKSEDS Annual General Meeting (AGM). UKSEDS is the national student space society, and its team of student and graduate volunteers organises the NSSC every year.

UKSEDS' 2022 AGM will be held on Sunday 6th March at 4 pm. The officers will present their reports for the year, and members of UKSEDS will be able to stand for positions on the Executive Committee. It is an opportunity for members to review the Committee's progress and ask any questions regarding the direction the organisation will take in the future. This year, our impartial returning officer for the exec election will be Jacob Smith.

## Agenda

- Approval of minutes of the 2021 AGM held online, in addition to the minutes of the EGM held on 23/08 online.
- Reports from the Committee
- Approval of the accounts
- Rule changes
- Elections for the Executive Committee
- Any Other Business

## The Executive Committee

The Executive Committee leads UKSEDS, creating and implementing our strategy and activities. They manage the staff, control the budget, and are legally responsible for the good-running of the charity as its charitable trustees. The Executive Committee are accountable to the other Trustees and to the Membership.

Executive Committee roles require a significant time commitment and should not be taken on lightly, but offer the opportunity to gain valuable management, communication, and teamwork skills. Experience of similar roles in university societies is recommended but not required, provided applicants are enthusiastic and willing to learn.

## Am I a member?

You are a member if you have registered to be a member on the UKSEDS website in the past year or you have renewed your membership in the past year. If you have any questions about membership, contact [membership@ukseds.org](mailto:membership@ukseds.org).

## I'm not a member, can I attend?

Yes. Non-members are not allowed to vote or stand, but may attend the meeting. If you would like to become a member it's free - check out our website for more details!

## I'm a member but don't have a conference ticket, can I attend?

Yes. Members can attend the AGM without a ticket for the conference, but should notify the Secretary ([secretary@ukseds.org](mailto:secretary@ukseds.org)).

## I'm a member but can't attend, can I still vote?

Yes. Any members who cannot attend the AGM in person but still wish to vote should appoint a proxy or make their voting intentions known to the Secretary ([secretary@ukseds.org](mailto:secretary@ukseds.org)).



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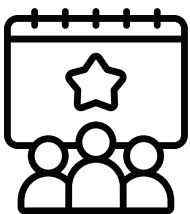
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universities.**

**One vision.**

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**Events** for academics, students, and employers to network, share knowledge, and discuss the challenges facing the sector.



**Careers advice** through our award-winning SpaceCareers.uk brand, the only website of its kind.



UKSEDS - UK Students for the Exploration and Development of Space - are the UK's National Student Space Society.

A registered charity, UKSEDS was formed in 1988, and is the UK chapter of SEDS - the world's largest space enthusiast organisation for both school and university students. SEDS was founded in 1980 by students at MIT and Princeton University and now has more than 60 chapters worldwide.

UKSEDS supports students and industry by running space projects, conferences, workshops, and outreach to promote involvement in the space sector.

**1250**  
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**140**  
Volunteers

**38**  
Branches



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- Events team member
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- Marketing vice team lead
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