



SPACE GENERATION
ADVISORY COUNCIL

PLANETARY DEFENSE CONFERENCE
PDC 2021
Vienna, Austria

Role of SGAC in Global Planetary Defence Outreach

SGAC is a global *non-governmental, non-profit* organisation and network which aims to represent *university students and young space professionals* ages 18-35 to the United Nations, space agencies, industry, and academia.

Conceived at the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) in Vienna in 1999.

6 Regions, 150 Countries, 15,000+ Members

“ To create, within the framework of the Committee on the Peaceful Uses of Outer Space, a consultative mechanism to facilitate the continued participation of young people from all over the world, especially young people from developing countries and young women, in cooperative space-related activities [...] ”



SGAC The Five Pillars



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Events

**Project
Groups**

**Professional
Development**

Scholarships

**UN-related
Activities**

SGAC Project Groups



Near Earth
Objects



Space Safety and
Sustainability



Space Law
and Policy



Space
Exploration



Space and
Cybersecurity



Commercial Space



Space Medicine
and Life Sciences



Small Satellites



Space
Technologies for
Earth Applications



Ethics and
Human Rights

Near Earth Objects Project Group



- The Near Earth Object (NEO) project group is dedicated to helping the worldwide planetary defence community to meet one of nature's greatest challenges
- The group provides a youth perspective to planetary defence through annual reports, competitions, conference attendance, and public outreach projects related to Near Earth Objects



**Near
Earth
Objects**
Project Group

<https://spacegeneration.org/projects/near-earth-object>

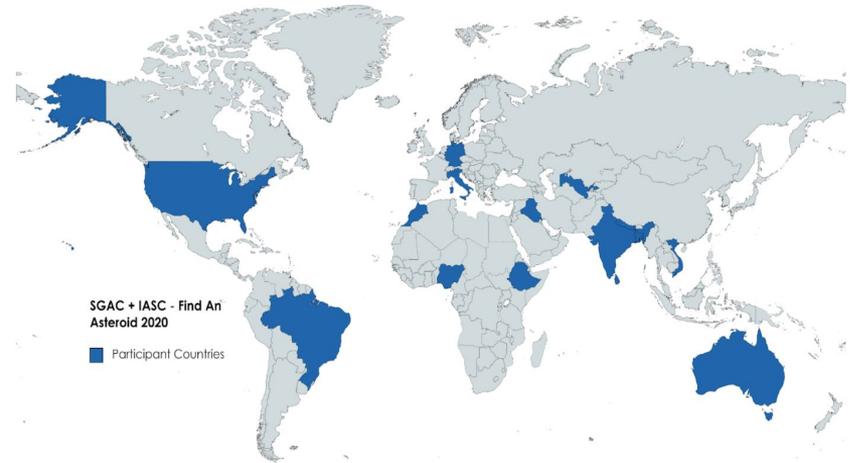


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INTERNAL ACTIVITIES

Find An Asteroid (FAA)

- The campaign was a collaboration between **SGAC** and the **International Astronomical Search Collaboration (IASC)**
- Applicants from around the world were invited to participate in this 4 week event with special focus on teams from schools and universities
- The campaign started on schedule receiving a total of **181** participants from teams of **3-5** members located in **different countries** over the globe. **50 teams** were selected to participate this year from more than **15 countries**



Move An Asteroid (MAA)

- This opportunity challenges students & young professionals worldwide to develop original ideas relating to Near-Earth Objects
- Winners will attend the 2021 SGC and IAC in Dubai
- Topics :
 - Planetary Defence, Exploration
 - NEO Study, Characterisation and Detection
 - NEO Impact Consequences
 - Global NEO Impact Warning System
 - NEO Resource Utilisation
 - Proposals and Concepts for NEO Missions Aiming at NEO Technologies and Resources to Support United Nations Sustainable Development Goals (SDGs)
 - Utilisation of NEO Technologies for Deep Space Exploration and Interplanetary Missions



<https://spacegeneration.org/sgc-2020-move-an-asteroid-competition>

Mars City Design

A flagship cross-collaboration between teams from 6 different SGAC Project Groups (PGs)

The SGAC team made it to the top 10 finalists for their design

NEO PG contributed by adding detailed research on Mining Technologies - on ground and the asteroid belt

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SGAC TEAM

MARS CITY STATE DESIGN COMPETITION 2020

Project Group	Member	Member	Member	Member	Member	Member
Space Exploration	Ben Hayward	Simone Paternostro	Ekaterina Selikova	Ankita Vashishtha	Andrew Foster	Rigel Kent Lorico Marco
Near Earth Objects	Bijaya Luitel	Swaraj Sagar Pradhan	Pavithra Manghaipathy	Supun Gunaratne		
Space Safety & Sustainability	Krittanan Sirottanakul	Umang Jain	Sujab Bhusal	Emma Baltide	Vignesh Kottayam	Viswanathan
Commercial Space	Harlee Quizzagan	Aleksandar Nikolov	Chaitanya Gopal	Alma Vizireanu		
Space Exploration	Beenish Batul	Gracio Joyal Lobo	Nataly Susana			
Space Medicine & Life Sciences	Nissem Abdeljeli	Bruno Pavletti	Lauren Church	Ahmed Baraka	Kristi Ray	

ACKNOWLEDGEMENTS

The SGAC Team is made of international members, both students and young professionals of 18-35 years age. The participants would like to thank the mentorship received from the Project Group leaders of SGAC. Special thanks go to Stefan Siarov from Vallaspae, for his helpful advice and Rigel Kent Lorico Marco, Motion Graphics Artist - Philippines.

Iliara Cinieli SEPG, Co-Lead	Antonino Salmeri SEPG, Co-Lead	Maren Hüllmann SSSPG, Co-Lead	Anne-Marlene Rüde SSSPG, Co-Lead	José Ferreira CSPG, Co-Lead
Smriti Srivastava NEOPG, Co-Lead	Georgia Maria (Yolanda) Kalogriou NEOPG, Co-Lead	Rochelle Velho SMLSPG, Co-Lead	Anthony Yuen SMLSPG, Co-Lead	Stefan Siarov Vallaspae

Designed by Daniela Jankovska & Gracio Joyal Lobo
www.spacegeneration.org

Provided insight into planetary defense technologies-incorporation into the mars city design

SGAC report to be published in the Mars Society's design book titled "Mars City States: New Societies for a New World"

NEO Renaissance

- An initiative by NEO PG members to help people by expressing their creative ideas in this stressful time of COVID-19
 -
- NEO themed **poster competition** where people from space, science and artistic fields came together to submit their imaginative visual ideas as posters on following topics :
 - **Planetary Defense Heroes**
 - **New Near-Earth Alternative Destinations**
 - **How asteroid impacts led to the extinction of the Age of Dinosaurs?**



Collaboration with IAF NEO Technical Committee : International Asteroid Day 2020

- In collaboration with IAF NEO Technical Committee, NEO PG released its **First Newsletter** on 30th June 2020
- This was the **First Newsletter** issued by NEO PG with the First Special Edition featuring our SGAC NEO PG founder : **Alex Karl, Chair of IAF NEO Technical Committee**
- NEO PG Collaborated with Alex for this interview to celebrate the **International Asteroid Day**
- NEO PG is also supporting the **Planetary Defense Conference 2021** organised by UNOOSA through sharing participation calls on the NEO PG monthly newsletters



<https://mailchi.mp/spacegeneration/happy-international-asteroid-day-2020>

Collaboration with IAF NEO Technical Committee: AIAA - LA Planetary Defense Virtual Panel

- NEO PG collaborated with Nancy C. Wolfson, the Vice-Chair of IAF NEO Technical Committee
- The Vice-Chair invited **Smiriti Srivastava, the NEO PG Co-Lead** for a virtual presentation on the topic "**Planetary Defense from Near Earth Objects (NEO's)**" at AIAA - LA Planetary Defense Virtual Panel in Dec, 2020 together with Mariella Graziano, an IAF NEO Technical Committee member



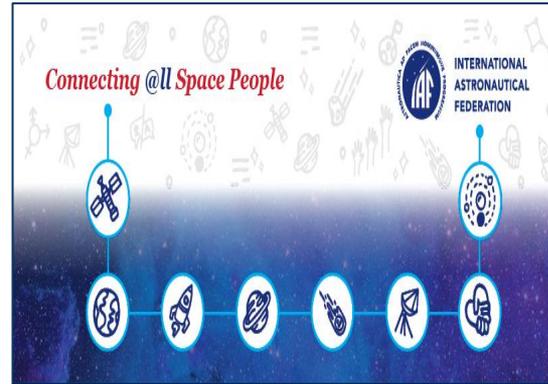
AIAA LA LV December 5 Ms. Mariella Graziano, Ms. Nancy C Wolfson, and Ms. Smiriti Srivastava

<https://www.youtube.com/watch?v=HLS00vIGW5I>

Conferences



- NEO Project Group is an annual participant in international conferences like Planetary Defense Conference, IAC, GLEX and SGC
- Projects Focus on Planetary Defense, Readiness levels of Asteroid Mining industry, Space resource utilization missions and Educational, outreach activities to support goals of UNOOSA





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UN-RELATED ACTIVITIES

COPUOS



- **Permanent Observer** status at United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS)
- Consultative status at United Nations Economic and Social Committee Representatives (UN ECOSOC)
- SGAC presents the outcomes of all of its conferences and projects at:
 - Scientific and Technical Subcommittee of COPUOS
 - Legal Subcommittee of COPUOS
 - COPUOS General Assembly



The NEO Project Group of SGAC annually submits and presents the results of :

- FAA Campaign
- MAA Competition
- NEO Renaissance Competition
- Published papers at IAC, PDC and GLEX
- NEO Projects that raise awareness about Planetary Defense
- NEO Projects that support UN Sustainable development goals

at the annual session of the UN COPUOS General Assembly, Scientific and Technical Subcommittee and Legal Subcommittee

IX. Near-Earth objects

170. In accordance with General Assembly resolution 69/85, the Scientific and Technical Subcommittee considered agenda item 11, "Near-Earth objects".

171. The representatives of Egypt, Germany, Italy, Japan, Pakistan, the Republic of Korea, the Russian Federation and the United States, as well as the representative of Chile, on behalf of the Group of Latin American and Caribbean States, made statements under agenda item 11. During the general exchange of views, statements relating to the item were made by representatives of other member States and by the observers for ESA, SGAC and SWF.





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INTERNATIONAL, REGIONAL, LOCAL AND ONLINE EVENTS

Space Generation Congress



- Held in conjunction with the International Astronautical Congress
- +150 delegates from +50 countries
- High-level speakers and Subject Matter Experts from space agencies, academia and industry
- Working Group topics on key issues related to Near Earth Objects
- > 75 SGAC scholarships and awards available

Don't miss out your opportunity to join our next **SGC 2021** in Dubai!

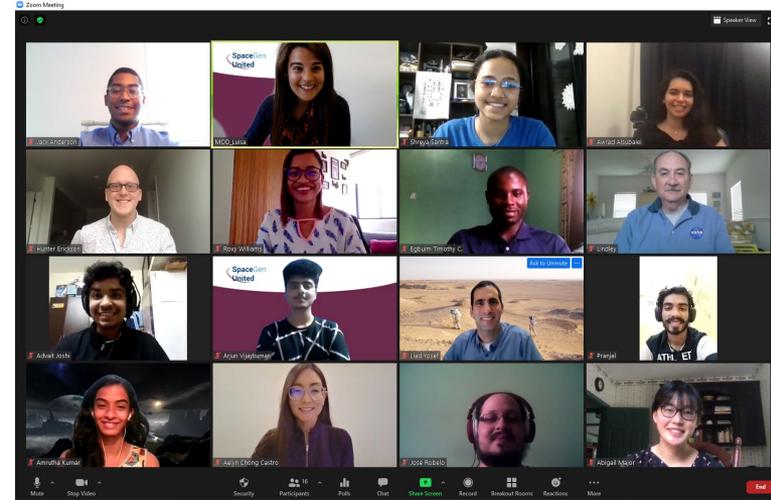
21st - 23rd October 2021



SpaceGen United



- SpaceGen United saw **143 delegates** from **53 different countries** joining together for **9 day** programme
- **14 hours** of keynote speeches and panel discussions featuring the **space economy** and the **state of the European space industry**
- **7 Workshops** took place during the week of SpaceGen United(virtual Hackathon,UN COPUOS simulation)
- The workshops provided a platform for delegates to explore a variety of topics with the support and input of **50 subject matter** experts from right across government, industry and academia



<https://spacegeneration.org/spacegen-united>



SGAC Webinars



SGAC doesn't stop! Make sure to check our running webinars and online events:

<https://spacegeneration.org/events/category/webinar>

<https://www.youtube.com/c/spacegeneration/videos>

> 50 webinars	> 110 Nationalities
	100 - 1500 Viewers

 <p>Emerging Space Program: Lessons Learned for the...</p>	 <p>Team Project Space for Urban Planning</p> <p>Investigating the impact of space technology and applications on urban planning to achieve a more sustainable future for global society.</p> <p>Chair: Stacey Capwell Training Associate: Dan</p> <p>1:00:01</p>
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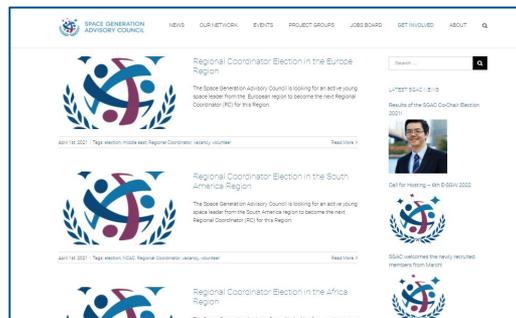
 <p>Round #1: Enrico Ghia</p> <p>ISSC2: after all the business challenges offered by the space sector and also in the alliance with other industry partners</p> <p>2:07:27</p>	 <p>Health in Space Women's Health in Space</p> <p>#HISchat</p> <p>56:01</p>
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If you want to organize a webinar, don't hesitate to reach out to webinars@spacegeneration.org for further information and support!

WHY BECOME A MEMBER?



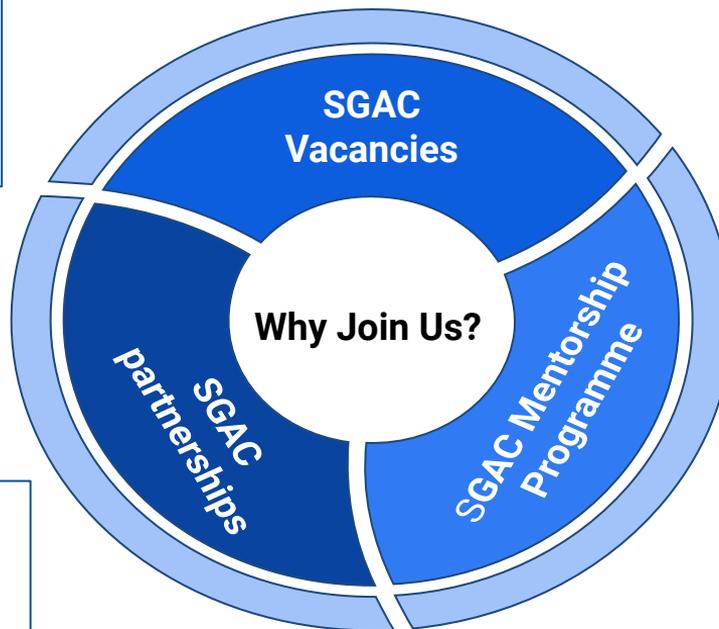
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<https://spacegeneration.org/vacancies>

Our partners and sponsors (over 100 and counting) around the world work closely with SGAC to help make our events and activities possible.

Some of Our Major Partners



The aim of this mentorship program is:

1. Connect SGAC members with experts in the space field
2. The members will be able to receive support and guidance as they continue to advance in their careers.

<https://spacegeneration.org/about/sponsor-us>

<https://spacegeneration.org/mentoring>

Be part of the Space Generation



Become a member

- Register yourself on the SGAC webpage (FREE membership)

Be informed

- Subscribe to the SGAC NEO Mailing Lists
- Join the NEO PG Channel #pg-neos on SGAC Slack
- Contact your NPoC and join your local network

Be involved

- Keep a look out for vacancies and opportunities
- Keep a look for scholarships opportunities
- Attend events and conferences

Future goals

- We intend to continue the current activities like (MAA, FAA, NEO Renaissance) campaigns, competitions with much **higher engagement levels** and **global participation**
- We have active participation in the UN activities, meetings and involvement with international space committees like IAF
- Also focusing on organising more **webinars** and **talks** focusing on NEOs and the threat the near earth objects possess to our humankind
- To create more **awareness** about the NEO's through social media activities, engaging more via the digital platform



THANK YOU

Smiriti Srivastava

Co-lead of SGAC Near Earth Object (NEO)

Project Group

smiriti.srivastava@spacegeneration.org



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