

The International Movement for Leisure Activities in Science and Technology

> MILSET YOUNG CITIZENS CONFERENCES

REPORT 2022 - 2023

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YCC REPORT 2022 - 2023

MILSET YOUNG CITIZENS CONFERENCES

The MILSET Young Citizens Conferences (YCC) are dedicated to the views and concerns of youth regarding the social impact of science and technology on the modern world, gathering their voices from every part of the globe and encouraging them to actively enter the discussion.

The exponential growth of new technologies and scientific knowledge has generated new and exciting possibilities; however, this has also raised new ethical, social and ecological issues. We believe that the open-mindedness of young scientists combined with their sense of social responsibility can yield important contributions to the dialogue.

GOALS

- Create a space where youth can express their views on the topic;
- Engage youth in discussion and debate concerning their future;
- Enable youth to discover their personal responsibilities;
- Encourage youth to express their concerns about the topic through participation in an open global discussion;
- Present the voice of youth through short video presentations which will be posted on the MILSET website and other internet platforms.

METHODOLOGY

The primary goals of these conferences are achieved through a three-step methodology: Concerns, Discussion and Actions.

• **Concerns:** Introduce participants to the issue. Start by asking them thoughtprovoking questions about the topic and their recent related observations and experiences. What changes have they noticed? Which changes are having the greatest impact on society? What could be the social consequences of those changes in the near future? Participants can be also shown short videos on the topic, or guest speakers can present various opinions.

- **Discussion:** In small groups, participants discuss ideas, issues and concerns related to the topic from the first part of the conference or from their own experience. Encourage them to identify possible future benefits and risks for each concern.
- Actions: Participants explore and list possible actions to solve or reduce the concerns they identified. What should be done to reduce the risks and apply for the benefits in the best possible way? Who should be responsible for accomplishing these actions? What can participants do to have an impact – at home, at school, in their community, and in the world? How should we behave in our everyday life? As teams, participants prepare short presentations or videos to communicate the results of their discussion and their recommendations.

TOPIC

The MILSET YCC Committee defines the discussion topic every two years. The topic for 2022 and 2023 was tdefined as "Our Future in Space"

OUR FUTURE IN SPACE

Today more and more people wonder if we should keep spending so much money exploring space without any real impact on humanity's future. We can't comfortably talk about reaching other star systems with present-day knowledge. At the same time, we have so many problems on Earth (climate changes, nuclear weapons, pandemics, world crisis and more) that we need to pay attention to and invest resources in scientific research.

It is now known that the space-leading states are ready to put fewer and fewer funds into space exploration. Does it mean that we have no future in space? Have we reached the limit of human abilities to make a scientific breakthrough or the limit of humans willing to spend money on programs that won't bring profit?

On the other hand, other grounds are yet to be developed, such as space tourism or space technologies development. In this regard, Elon Musk is contributing to the latter by investing his resources.

Talking about the benefits of space exploration, we are witnessing the growth of interest in science and technology among young people, thanks to the new space expedition and space-related discoveries. We can't ignore that exploration brings new technologies that might help us solve some global or everyday problems.

Here are some questions to think about for further proposals:

Moon, Mars and planets of the solar system: Do you think it is a good idea to colonize them? What would be the positive and negative outcomes of doing so?

Space Tourism: What are the pros and cons of space tourism development? Will mass space tourism bring new life to the space industry? Could it be the source of environmental problems?

Space Debris: Do you think space debris is a serious problem now? Do you think it could become a severe problem in the future? What do you propose to reduce it?

New Materials: Can new planets become sources of new minerals or new elements and materials? And if so, what should be done to reach this goal? Do you think it makes sense to bring resources from outer space from an economic perspective?

International collaboration: What are the advantages and disadvantages of international cooperation in space exploration? Could it set guidelines for collaboration on Earth?

Space jobs of the future: The space industry is growing so fast-food engineering, mining specialist, media specialist, space tourist managers, Space Medicine, space architects and many other jobs will be required in the future. Which careers do you think young people should be focused on to prepare for the future? What is the challenge for education specialists in the world?

PARTICIPATION

YCC is officially organised at MILSET Expo-Sciences and MILSET Regional Expo-Sciences where participants from 13 to 25 years old are invited to participate by registering to the activity.

Throughout the year, local, regional and national youth STEAM organisations around the world are invited to organise YCCs to encourage youth to discuss their thoughts and propose suggestions based on their knowledge and experience. YCC can be held on site or virtual.

All information to organise a YCC is available in MILET website www.ycc.milset.org

YCC AROUND THE WORLD

+ 550 YCC Ambassadors + 40 Countries



Through 2022 to 2023 youth around the world discussed about "Our Future in Space" and expressed their ideas and proposed solutions to create a better world.

Proudly find bellow the proposals of more than 550 brilliant, committed youngsters from more than 40 countries that represented this outstanding programme as YCC Ambassadors.

YCC AT MILSET ESR'S AND ESI

MILSET EXPO-SCIENCES ASIA 2022



Date: February 23 Place: The Cultural and Scientific Association facilities, Dubai, UAE. Organisers: MILSET Asia, Emirate Science Club Round Tables: 10 Countries: 17

International Speakers from Mohamed Bin Rashid Space Centre and NASA

- ENG. Reem Al Ali, UAE, Research Assistant at Mohamed Bin Rashid Space Center.
- Mr Jorge Sotomayor, USA, Lead Increment Scientist International Space Station Program at NASA Johnson Space Center.



YCC Moderators: February 23

- Mrs Ksenia Salnikova MILSET Programme Coordinator
- Mr Reni Barlow MILSET Vice-President

YCC Ambassadors: 55

- MARTIN LIPE Albania
- GABRIEL GREENWICH Bosnia and Herzegovina
- ASAD GRABOVICA Bosnia and Herzegovina
- LETICIA BEATRIZ MONTEIRO BARBIER -Brazil
- NICOLE ALVES LIMA RECH Brazil
- DIOGO DE SOUZA REGIS Brazil
- ISAURA VIEIRA BARBOZA Brazil
- VICTORIA VALENTINA RUBINA SOTO -Chile
- BELÉN NOEMÍ ESPINOZA ZEPEDA -Chile
- MAREK MATYSKIEWICZ Czech Republic
- SANDY SALEM MOHAMED ANWAR -Egypt
- ABDELRHMAN HATEM MOHAMED
 SHAWKAT Egypt
- SHIVAM SACHIN JOSHI India
- HRIDAY AGRAWAL India
- PARMIDA RAZAGHZADEH Iran
- BARAN ESMAILI RAKI Iran
- HELIA AFZALI Iran
- FILIPPO PIERETTI Italy
- MATTEO SANTONI Italy
- LEONARDO CERIONI Italy
- CARLO DAOLIO Italy
- EMANUEL BUTTACI Italy
- ALESSANDRO GRANDI Italy
- STEFANO MERLO Italy

- SANSKRITI ARYAL Nepal
- KUSHAL POKHREL Nepal
- ROHIT KHADKA Nepal
- NIRAJ GUPTA Nepal
- BIBEK SHAH Nepal
- SHRAJESH THAPA Nepal
- ROJIN SHARMA Nepal
- SNEHA GHIMIRE Nepal
- SMITH CHAKRADHAR Nepal
- HAYAT YAHYA OBAID AL-MAHREZI
 Oman
- OMAIMA SULIMAN RASHED
 AL-KANBASHI Oman
- NASSER SAID NASSER AL SHUKAILI
 Oman
- VIACHESLAV IVANOV Russia
- ROMAN OKHLOPKOV Russia
- SEIF NAJEH Tunisia
- SAFA BEN HAJ HASSINE Tunisia
- ADEM NOUIRA Tunisia
- NOYAN DOGANGÜN Turkey
- YIGIT KAAN KIZLIER Turkey
- IDIL BILDIRICI Turkey
- ILDEM AKGUN Turkey
- ÖYKÜM KÖRPEKAYA Turkey
- OLEKSANDR LUCHYN Ukraine
- ILLIA NAZARENKO Ukraine
- MOHAMMED | M ABOELKHER -United Arab Emirates
- LUPU R. SEBASTIAN RADU Romania



MILSET EUROPE EXPO-SCIENCES 2022



Date: July 22 Place: tefan cel Mare University Suceava, Romania Organisers: MILSET Europe, MILSET Romania YCC Ambassadors: 40



MILSET VOSTOK EXPO-SCIENCES 2022



Date: October 1st Place: Turan University, Almaty, Kazakhstan Organisers: MILSET Vostok YCC Ambassadors: 40

YCC Ambassadors Proposals:

1

Concerns: Waste disposal via a black hole, Benefits & Risks: Eco-friendly, expensive, far, Proposed Actions: Use of hydrogen fuel, solar sails and unmanned ships

2

Concerns: Building a base on the moon to launch rockets. Benefits & Risks: Environmentally friendly, cheaper than from the Earth, less fuel, workers are required for permanent residence and work. Proposed Actions: Use of automated robots

3

Concerns: Singularity reactor Benefits & Risks: Endless supply of electricity. Eco-friendly. Proposed Actions: Creation of an engine to overcome the gravity field of a black hole.

4

Concerns: Mining helium 3 on the moon

Benefits & Risks: Fusion provides more efficiency, Eco-friendly. The percentage of helium 4 is large, so it is necessary to separate helium 3 and helium 4. The problem of delivering helium to Earth.

Proposed Actions: Development of thermonuclear fusion

5

Concerns: Battery belt, Benefits & Risks: Eco-friendly. Efficient use of solar resources regardless of the weather. It takes a lot of silicon to make batteries. Transportation of equipment into orbit.

Proposed Actions: Development of lightweight solar cells. Development of spacecraft with high carrying capacity



MILSET EXPO-SCIENCES INTERNATIONAL 2023



Date: October 24 Place: UPAEP University Convention Centre, Puebla, Mexico. Organisers: MILSET Round Tables: 10 Countries: 19

YCC Team:

Activity Coordinators: Ksenia Salnikova and Stefan Dochev Logistic Coordinador: Liz Vela Delegates Assistance: Alan Gómez



Jorge Sotomayor

Research Portfolio Manager, and lead of the STEM Sphere within the Research Integration Office in the International Space Station (ISS) Program, NASA.

Presenting: "Space Jobs"



Livette Santiago Environmental Engineer at NASA Johnson Space Center, Greening & Restoring our World (GROW) ERG Co-Chair, NASA.

Presenting: "Space Debris"



Carlos Fontanot International Space Station Imagery Manager, Chair of the ISS Imagery Working Group, NASA.

Presenting :"International Cooperation"



Vladimir Bozhilov Associated Professor at the Department of Astronomy, Faculty of Physics at Sofia University, Bulgaria

Presenting :"Searching for Earth 2.0: The Future of Humankind in Space"



Charles Galindo Jr. Research professor for UPAEPs Department of Bionics, Aerospace and Mechatronics

Presenting: "Future Exploration Strategies"

YCC Ambassadors:

- RODRÍGUEZ GUADALUPE Argentina
- MIGUEL MARTINS Brazil
- NIKOLETA KALINOVA Bulgaria
- ALEKSANDRA CHAVDAROVA Bulgaria
- NIK ARTSIMENIA Canada
- STERLING HUANG Canada
- EUNJO AN Canada
- OLIVIER LAFLEUR Canada
- AKRAM TAHAR Canada
- MARIANE ANGERS Canada
- JASMIN PELLETIER Canada

- AFAQ VIRK Canada
- CINDY CHENG Canada
- HOOMAN REZA Canada
- ADARA SHILLING Canada
- JACOB E. SANTANDER Chile
- FRANCISCA I. QUIJADA Chile
- MARTINA F. ARREDONDO Chile
- NICOLE F. NAHUM Chile
- JENNIFER L. LOZADA Colombia
- JULIAN E. TRUJILLO Colombia
- MARÍA P. MARÍN Colombia

- JUAN PABLO HIGUERA Colombia
- ANGIE M. PULIDO Colombia
- JHON S. BAUTISTA Colombia
- JUAN D. AYALA Colombia
- VALERIA PABÓN Colombia
- MARÍA J. AGUILAR Costa Rica
- JAKUB HORÁK Czech Republic
- VOJTECH FOJTÍK Czech Republic
- MILAN VENCL Czech Republic
- SIMON JANOUSEK Czech Republic
- JONATHAN BONNEFOY France
- PIETRO CICERI Italy
- DAVIDE LOLLA Italy
- NOEMI M. PIA Italy
- FELIPE DE JESÚS ROMO Mexico
- ERNESTO M. SILVA Mexico
- EMMANUEL ROBLES Mexico
- JESUS ALBERTO LOYOLA Mexico
- ARLIS DE JESÚS DE LA CRUZ Mexico
- AAMIR SALIM Oman
- MOAMIN MOHAMMED NASSER Oman

- KYARA M. CAMACHO Peru
- FABRIZIO R. CALIZAYA Peru
- JASSIM ESSA AL-SHAMIRI Qatar
- ALI HAMAD AL-HAMADI Qatar
- OMAR MOHAMMED AL EMADI Qatar
- SAAD NASSER ALKUWARI Qatar
- PETCU SEBASTIAN-FLORIAN Romania
- SIMIONESCU LARA-IOANA Romania
- ANGHEL MIRUNA TEODORA Romania
- MURESANU IOANA Romania
- SERBAN CHRISTIAN Romania
- PISCANU MARIA Romania
- MILITARU T. AMALIA Romania
- LUJZA L. LAVRIKOVÁ Slovakia
- JAKUB BUZALKA Slovakia
- MARTÍ CASALS Spain
- LI, YU-CHUN Taiwan
- YANG, JHONG-YU Taiwan
- PENG, ZI-YU Taiwan
- YEH, HSIN-LU Taiwan





MILSET

YCC AMBASSADORS PROPOSALS SUMMARY

- Establish cooperative relations between countries that help in the formation of the future professionals that will work at NASA.
- Create learning strategies between education and new technologies that lead students and young people on the transition of the space exploration.
- Encourage subsidy programs or public-private partnerships to make space tourism more affordable.
- Create a centralised organism that creates and regulates policies about space exploration with transparency through a board of delegates from all the nations.

More details see APENDIX A

INTERNATIONAL REPORTS

YCC - MONTREAL REGIONAL SCIENCE AND TECHNOLOGY FAIR

Date: March 28 to 29, 2022 Place: Montreal, Canada Event: Montreal Regional Science Fair YCC Ambassadors: 68 Country: Canada YCC Ambassadors proposals:

- Greater collaboration between countries toward common goals.
- A memorable quote was "Space exploration is extremely important and worthwhile; however, we are facing immediate challenges which require more attention at this time".

YOUNG CITIZENS CONFERENCES FOR ASIAN AND ASEAN COUNTRIES 2022

Date: September 9-11, 2022 Place: Online (Zoom Meeting) - Indonesia Organisers: DoctoRabbit Science Inc No. of debate tables: 4 Countries: 13

Organising Team:

- Dyah Ratna Permatasari
- Annisa Dyah Lazuardini
- Vivi Febrianti
- Carlos Nemesis
- Aulia Hariz
- Nova Khamsah
- Diah Kusumaningrum Eryando
- Amira Nurnaya Sakinah

Invited Speakers:

- Mr Jorge L. Sotomayor, NASA, USA
- Mr Eugenio Urrutia Albisua, UPAEP, Mexico
- Dr. Premana Wardayanti Premadi
- Dr. Ardi Sutedja
- Dr. Wahyudi Hasbi
- Dr. Filda Citra Yusgiantoro

YCC Ambassadors:

- UMAIMA BALAWI Algeria
- NURNADIAYU NATASHA BINTI HAJI
 ADANAN Brunei
- HAZRY SALWADI Brunei
- NU'MAN KHAIRULANWAR Brunei
 Darussalam
- LING WEI MING Brunei Darussalam
- TING PEI TONG Brunei Darussalam
- ANTWI ADDAI Ghana
- SHIVA VISHWAS DALVI India
- PANKAJ JALAUN India

- MANE DISHA RAKESH India
- SUKRUT RAVINDRA PANDIT India
- HARSH ASHUTOSH TIWARI India
- ANUSHA DAIVAJNA India
- RAJNANDANI JAISWAL India
- SOHA PRANALI PRABHAT JOSHI India
- NAMIR BELKAR India

.

- DAUNDKAR SAURABH SANTOSH RAJASHREE - India
- SHRAVAN BHOSLE India

MILSET

•	CHOUDHARY POOJA - India	•	PUTRI SYAHIRA PERTIWI - Indonesia
•	HARSH ASHUTOSH TIWARI - India	•	MUTIA RATU - Indonesia
•	ANISHA - India	•	EIDELLUIS NOVELISTIN - Indonesia
•	NIKITA VIJAY ADHALGE - India	•	SINTA AZZAHRA FIRDAUS - Indonesia
•	NISHA GAIKWAD - India	•	AISHA FAIHA HAKIM - Indonesia
•	ADITYA MHATRE - India	•	AULIA TIARA MAHARANI - Indonesia
•	GAURI ANIL GONJARI - India	•	MUHAMMAD SHAFWAN MUATTHAL
•	FATIMA DAWOOD RAMRAJKAR - India		- Indonesia
•	RIDDHI SARKALE - India	•	RANUGUNAR SAVAHASTA - Indonesia
•	KHAN KULSUM BANO ABRAR AHMED	•	CANTIKA TANSYA SINAGA - Indonesia
	- India	•	NAYLAANGGRAINI - Indonesia
•	ANCHAL KARANDE - India	•	TANIASUKRIANI - Indonesia
•	TEJAS SANJAY DESAl - India	•	RADEN AYU ANNISA MAHARANI
•	HAMIZAH AZIM BHIKAN - India		WULANDARI - Indonesia
•	SIDDHI SURVE - India	•	M. YOGA OKTAMA - Indonesia
•	SAYALI - India	•	RUMAISYA - Indonesia
•	KAJAL SHARMA - India	•	PRABA NARI RESI - Indonesia
•	OMKAR UMAJI KADAM - India	•	ERNESTA JOLIE RUTH TAMPUBOLON -
•	ADITYA KARMOKAR - India		Indonesia
•	SHAIKH SOFIA - India	•	Adric megantara reksoatmodjo
•	SARIKA SURESH JADHAV - India		- Indonesia
•	SHRADDHA SANJAY POL - India	•	BERTHA ROSIANNA SINAGA - Indonesia
•	RUSHIKESH DILIP DANGAT - India	•	RACHEL TAMBUNAN - Indonesia
•	DEEP SHRIRAM KADAM - India	•	JIHAN MUKHBITA TSAWAB - Indonesia
•	JINAL SOMWANSHI - India	•	SOLIDA INDAH JELITA - Indonesia
•	URJA RAMAKANT KUDALKAR - India	•	FRISKILA NOVELIA NAPITUPULU -
•	SURAJ SUNIL BENDRE - India		Indonesia
•	SNEHA - India	•	RONAULI LISNARI SIMAMORA -
•	MAHAMED NABIL MUSTAQEEM		Indonesia
	LANDGE - India		MICHELYN TRIVENA E - Indonesia
	HAIKAL ZAIN REDYA - Indonesia	•	GABRIEL TAURAN - Indonesia
	SVETLANA JASMINE REDYA - Indonesia		SYAHLOM DEMARTC SIMANJUNTAK -
	NURULLIA - Indonesia		Indonesia
	HAIKAL DWIAHYAN PUTRA - Indonesia		PETRA NOVITA - Indonesia
	EGI PRATIWO - Indonesia		PAHOTHON YOHANES MARIO
	ZAHIRA SALSABILLA - Indonesia		LUMBAN GAOL - Indonesia

	•	ADLI FIRLIAN ILMI - Indonesia	•	SITI CARISSA MAHARANI PRAWIRA -
	•	SAMUEL ARYA WIJAYA - Indonesia		Indonesia
	•	dian vania jessicha rondonuwu	•	ASCHARYARESWARI AYUDYA
		- Indonesia		WIBOWO - Indonesia
	•	DANIEL MACARTHUR SIHOMBING -	•	MUTIA MARTALINA - Indonesia
		Indonesia	•	UMA LARASATI - Indonesia
	•	ALLIN ALYA YASMIN - Indonesia	•	DHIYANDRI ELMIRA FIRDAUSI - Indonesia
	•	DINDA ANGELICHA LUMBAN BATU -	•	GEDE BAGUS BRAHMANTYA WISTARA
		Indonesia		- Indonesia
	•	ANYNDITA - Indonesia	•	FADLAN DJATIWARU RAMADHAN -
	•	ILONA CLARISTHA - Indonesia		Indonesia
	•	AURELLIA ZAHRANI NGABITO -	•	CLARISSA TSARY RAZAN MAHIRAH -
		Indonesia •		Indonesia
	•	CALYSTA ZAHRA ALMIRA DARMAWAN	•	ARSYA ACKMAR PRASTIYO - Indonesia
		- Indonesia	•	LENNO RAFIF ARKANA - Indonesia
	•	M. ALFAN ALI - Indonesia	•	FAKHRI FATURROCHMAN - Indonesia
	•	M.ELVANOKY FACHRIZKY G.S -		AQILA KHANZA PARAMITA HUDA -
		Indonesia		Indonesia
	•]	DEWI MASYITHOH, M.PD Indonesia	•	MUHAMMAD FACHRI HERLAMBANG -
	•/	VIQRI RAMADHAN WALUYA - Indonesia		Indonesia
	•	KAYLA MAYZAHRA - Indonesia	•	MUHAMMAD ZHAFRAN RIFQY
	\mathcal{A}	MATTHEW YUSUF SUPRIYARSO -		CHALID - Indonesia
		Indonesia	•	GLENN RODERICK SIAHAAN - Indonesia
L	• //	MUHAMMAD HANIF - Indonesia	•	GULA NATANAELA ADILUHUR -
	•	NORMAND ADHIPRAMANA SAPUTRA		Indonesia
	\mathbb{A}	- Indonesia	•	ALLYSHA AZALEA HERMANTO -
	-	SHAYNA SHANARA - Indonesia		Indonesia
	\cdot	ADI ZULFIKAR - Indonesia	•	NASYA KAYLA SHAHNAZ - Indonesia
	$\left \cdot\right\rangle$	ATTHIA - Indonesia	•	FEBRINA SALSABILA AZZAHRA
	•	AGUS FATURAKHMAN - Indonesia		Indonesia
	• \	FATHIYA NURIL ARIFIANDRA - Indonesia	•	CLARISSA TSARY RAZAN MAHIRAH -
	•	RADEN AYU ANNISA MAHARANI		Indonesia
		WULANDARI - Indonesia	•	QUEISHA AURELLIA A. P. P Indonesia
	•	ATHIYYA MAJA RASHEESA - Indonesia	•	BRAHMANDITO GIRINDRAWARDHANA
	•	AGNES ANINDYA - Indonesia		- Indonesia
	•	NADINE AL MADIA SHERAZ - Indonesia	•	INDIRA DANISWARA ADIANTO -
			75	

- DIAN SYAH Indonesia
- TEUKU ARKANSYAH ALI Indonesia
- AMEERA INDRIANI LUBIS Indonesia
- MOHAMMAD JOVAN KAMAL Indonesia
- NATHANANDA MULYONO (NADA) Indonesia
- AMMARA BATRISYA HUSNA Indonesia
- MUHAMMAD RAAFI ASLAN RINANDI Indonesia
- AMANDA SHASKIA Indonesia
- CHRISTINA DEBORA ANRI PUTRI SIMARMATA Indonesia
- BOOZARPOUR SAHAR Iran
- DIVYA KHADEEJA Indonesia
- SHARVESSH A/L JEGATHESAN Malaysia
- SASHWIN JEGATHESAN Malaysia
- TAKSHIVEEN A/L S.SIVARAU Malaysia
- NISHAADHANA PRABU Malaysia
- RAWINEAS JAYABALAN Malaysia
- JANANEE MOHAN Malaysia
- JANANEE MOHAN Malaysia
- DARVENA A/P SELVARAJ Malaysia
- THEJASWINI A/P SIVA Malaysia
- ANDREA MARIÑO Mexico
- MATHIAS ADRIEL BECERRA SANCHEZ Peru
- ANGELY COCA LOPEZ Peru
- GINA L ORTIZ ANDRADE Puerto Rico
- SVETA Russia
- SOFIA Russia
- TIMOFEI APRELEV Russia
- FILIPP GASIC Russia
- KITTIYA MAHABHOL Thailand
- AHMET ERHAN AVCI Turkey
- OSIRUMIJI IHUDE Zimbabwe

YCC Ambassadors Activities and Proposals:

- Young Citizen Conferences for ASEAN 2022 Opening Ceremony & NASA Live Talk
- https://www.youtube.com/watch?v=UtQ4wb3YHLU&t=665s
- Young Citizen Conferences Keynote Speech & Plenary Session
- https://www.youtube.com/watch?v=_Rcfm8jhrOk
- Young Citizen Conferences for ASEAN and other Asian Countries Ambassadors Presentations & Closing Ceremony
- https://www.youtube.com/watch?v=CQDdBaYnVmO

YCC - NATIONAL EXPO-SCIENCES CHILE

Date: October 27, 2022 Place: Central University of Chile Organisers: Fundación Club de Ciencias Chile No. of debate tables: 10 Countries: 3 YCC Ambassadors: 62 YCC Team: Iosé Alberto García Torres

- José Alberto Garcia Tor
- Victoria Rubina



YCC - NATIONAL MEXICAN EXPOSCIENCES 2022

Date: December 8, 2022

Place: San Luis Potosi, Mexico

Organisers: The National NETWORK of Youth Activities in Science and Technology (LaREDMex)

No. of debate tables: 10

YCC Team:

- YCC Coordinator; Roxana de León Lomelí
- YCC Coordinator; Javier Gómez Ríos
- Logistics Coordinator; Lisette Vela

Invited Speaker: PHD. Emmanuel Antonio Vázquez Martínez, Cabo Tuna Project, Mexico.

YCC Ambassadors:

•	LUIS MANUEL FLORES ARRIAGA	•	ELFEGO JOSHUE GONZÁLEZ PÉREZ
•	JESUS ANTONIO BARRAGÁN ALEJO	•	JESÚS GASCA MERLO
•	MARIO ALEJANDRO DE LEÓN PARADA	•	JOSÉ MARIANO MORALES SOLIS
	YEUDIEL SAUCEDO GARCÍA		PABLO GERARDO MORALES SALDIVAR
	LIZBETH PAOLA DURÁN MELÉNDEZ		EMMANUEL VARGAS RUIZ
•	LUIS ANGEL HERNANDEZ AVILES	•	JOCELYN GUADALUPE RIZO ROBLES
•	raúl acosta murillo	•	JOSÉ GUADALUPE CORONADO
•	ROCÍO DANIELA CANTÚ LEOS		RAMÍREZ
•	JOSÉ FRANCISCO LOERA ARZOLA	•	SOFÍA PALACIOS CUEVAS
•	NAYLEN ALIODETTE ESQUIVEL	•	ALAN POISOT PALACIOS
	MIRANDA	•	CITLALIN ELBA CORAL DÍAZ
•	ANDRÉS IARIR PEREA	•	JESÚS ANTONIO TORRES CÁRDENAS
•	MONSERRAT GUADALUPE MOLINA	•	JENIFER SARAI TAMAYO TOPETE
	GUZMÁN	•	EMANUEL JUÁREZ MORENO
•	JAEL MARÍA RAMÍREZ VÁZQUEZ	•	URIEL MORALES CASTILLO
•	FRANCISCO JAVIER SANCHEZ	•	FABIOLA FLORES DE LA ROSA
	SALINAS	•	JESÚS MANUEL FLORES HERNÁNDEZ
•	LUIS NOEL HERNÁNDEZ XOCHIHUA	•	MICHELLE QUINTO ALBA
•	MARTHA DANIELA TREVIÑO BERNAL	•	SAÚL FERNANDO CASTILLÓN
•	ISAAC BAEZ MARTELL		SANDOVAL
•	DÁMASO CALDERÓN GARCÍA	•	BRIANNA ITZAYANA VALENZUELA
	ELBA REGINA ESTÉVEZ BANDELIS		GRAJEDA

- FERNANDO ESTRADA GUEVARA
- KAROL VALERIA MORALES MARTINEZ
- MARIFER LEÓN BUSTAMANTE
- ADRIAN EMMANUEL GARCÍA GARCÍA
- ELVA XIMENA GALVAN CASTILLO
- FRIDA CAMPECHE PARADA
- ALEXA FLORESCANO OLGUÍN
- ALEXIS ALDAIR QUIROZ NEVAREZ
- AXEL ADRIAN MOGUEL CUESY
- FLORES DE LEÓN DIEGO
- ISIS DESIREE FIGUEROA CARDONA
- MÓNICA GALINDO RAMOS
- ZIANNYA IXOYE HOYOS CARTAMIN
- XAVIER ANDRE BAUTISTA CISNEROS
- EVELYN VIRIDIANA GARCÍA RUÍZ
- LEONARDO PÉREZ CIPRÉS
- MIGUEL HERNÁNDEZ JUÁREZ
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YCC Ambassadors Proposals Summary:

- Create programs to raise public awareness about the production and consumption of space debris.
- Prioritize resources towards space research.
- Mental health professionals.
- Implement a new educational model in which economic, psychological, environmental and learning conditions are considered.
- Development of intrinsic and autonomous technological systems that allow the extraction, monitoring and protection of materials.
- Improve the design of space navigation systems so that the amount of space debris is minimized.
- Generate links between private initiatives, universities and projects on aerospace issues.
- Regulate space flights, legislate space flight, improve fuels and reduce material costs.
- Search for problems that cannot be covered with the materials found on earth or that are scarce.
- Creation of new spatial objectives with sustainable and sustainable development.

APENDIX A (ESI 2023)

Concerns: The education, access to education is difficult in countries in developing Benefits & Risks: Teach to young people, help to form the future. Proposed Actions: Organization as the NASA contribute with the formations of young

Concerns: Space jobs, many professions are necessary for working in the space, but is

difficult to access. Benefits & Risks: The young are the future for solving the new challenges.

Proposed Actions: Establish cooperative relations between countries that help in the formation in the future professionals that will work at NASA.

Concerns: use of AI in the space industry

Benefits & Risks: Benefits: greater efficiency troubleshooting in record time Risks: autonomy without control job displacement.

Proposed Actions: greater research on the subject for the creation of new jobs and greater mastery of new technologies

Concerns: use of technologies with greater autonomy in robots. Benefits & Risks: more efficient robot, but without human intervention. Proposed Actions: improvement in the control of robot autonomy

Concerns: Lack of opportunities for many children to choose a science oriented career. **Benefits & Risks:** Easy access to factually correct information regardless of the financial situation.

Proposed Actions: Creating a website for democratic education.

Concerns: The possibility of human errors during the preparations of space missions and during the mission themselves

Benefits & Risks: Increased safety for astronauts in space.

Proposed Actions: Integrating the AI in the process of planning the space missions and aboard the spaceship.

Concerns: International cooperation in space.

Benefits & Risks: May improve the space exploration due to a better cooperation of the nation could increase competitiveness.

Proposed Actions: Create a national organization above every nation. Based on a democracy

Concerns: Space Jobs, Benefits & Risks: the future of opportunity / international INEQUALITY. Proposed Actions: establishment of an international regulatory body. **Concerns:** High Costs: Space missions and projects often involve significant financial investments, and cost overruns can strain budgets.

Benefits & Risks: Physical Risks: Astronauts face the dangers of space radiation, microgravity-related health issues, and the potential for accidents during launches, spacewalks, or reentries. Scientific Discovery: Space jobs contribute to our understanding of the universe, leading to new scientific discoveries and breakthroughs in areas such as astrophysics, planetary science, and cosmology.

Proposed Actions: Increased Funding: Governments and private entities should consider increasing funding for space programs to support ambitious missions, research endeavors, and the development of advanced technologies.

Concerns: Reliability and Long-Term Performance: The long-term behavior of new materials in the harsh space environment is not always well-understood. Concerns arise about the reliability and durability of these materials over extended periods.

Benefits & Risks: Increased Efficiency: New materials can enhance the efficiency of spacecraft components, leading to improved performance, reduced energy consumption, and extended operational life.

Proposed Actions: Comprehensive Testing Programs: Establish rigorous testing programs to thoroughly evaluate the performance, durability, and environmental impact of new materials under simulated space conditions.

Concerns: Space Tourism, Benefits & Risks: Space awareness Proposed Actions: International regulations

Concerns: Space Waste, Benefits & Risks: Collision damage Proposed Actions: Global policies and cleanup innovation

Concerns: Space tourism Benefits & Risks: Creating new jobs, /exclusivity. Proposed Actions: Green tax, scholarships, medical assistance.

Concerns: Space debris Benefits & Risks: New experiences/ecological risks Proposed Actions: Training, sponsorships

 $\ensuremath{\mathsf{Concerns}}$: the need to explore hostile space environments without immediate human intervention

 $\mathsf{Benefits}\ \&\ \mathsf{Risks:}\ \mathsf{accelerate}\ \mathsf{the}\ \mathsf{discovery}\ \mathsf{of}\ \mathsf{new}\ \mathsf{phenomena}\ \mathsf{and}\ \mathsf{improve}\ \mathsf{our}\ \mathsf{understanding}\ \mathsf{of}\ \mathsf{space}.$

Proposed Actions: Use of Al in robotics for space exploration.

Concerns: Limited accessibility due to high costs excludes many people from space tourism.

Benefits & Risks: Space tourism can drive technological innovation and generate revenue for space exploration.

Proposed Actions: Encourage subsidy programs or public-private partnerships to make space tourism more affordable.

Concerns: Space collaboration; That every space station will have its own discoveries and each space administration requires some resources that other have so they will not be able to achieve their goal because of that limitation

Benefits & Risks: That every space administration will share the same resources so they can achieve new things in space, disadvantages are that some countries may not share there resources or researches so then this council will achieve nothing.

Proposed Actions: To make a space council like the UN so every space administration participate in it and provide what needed to walk a new step into space exploration and discover and achieve new things to humanity evolve

Concerns: Space tourism,

Benefits & Risks: It may have some benefits to people to explore beyond our world and explore space , disadvantages are that it may be expensive and not for everybody.

Proposed Actions: To make a space administration for people who would like to explore space.

Concerns: The privatization of space

Benefits & Risks: Stimulated innovation, reduced costs, and increased the frequency of space missions.

Proposed Actions: Create international laws to regulate access to space Concerns.

Concerns: Space Tourists are not trained how to act in unexpected situations, which may be dangerous for them.

Benefits & Risks: Making space tourism available to more people will lead to lots of money income to the private space companies, which can then relocate them towards their research. However, there is the risk of changing the focus from research to just tourism, and mixing both could lead to less goals for developing science.

Proposed Actions: Create a clear regulation book that is valid for every single space company, and allowing them to develop space tourism only if they fulfill certain criteria and present a certain amount of space research by the end of each year.

Concerns: Space Tourism concerns us because it could raise more awareness among people once they have been to space. Most of the people cannot relate to having a goal to work for space because they have never seen it. Once they do, they will be much more likely to work towards our future in it.

Benefits & Risks: It is beneficial for humanity to knows about space because that's how it will spread the information. However, there are risks such as the space radiation and the space debris, which could potentially collide with a space tourist rocket.

Proposed Actions: In order to maximally recreate the feeling in space, we would experiment more with microgravity, but here on Earth The goal is to make people feel like they are in space without actually being there.

Concerns: one-time use of plastic bottles.

Benefits & Risks: plastic can be reused; not whole bottle could be recycled. Proposed Actions: Using PET bottles as filament for 3D print Concerns: Space privatisation - "One big company to rule all".

Benefits & Risks: Faster development of new technologies, cheaper prices, more options for transportation into space | in the end there will be only one big company with its services and new space monopoly will be created.

Proposed Actions: Allow the privatisation and support new startups.

Concerns: Space trash - need of cleaning.

Benefits & Risks: danger of travelling to space due to small debris travelling at high speed. **Proposed Actions:** We need to start cleaning the earth's orbit, or else there will be iron shield blocking our path to new space exploration.

Concerns: constitute an international space organization having a common fund of resources for the individual improvement of each country.

Benefits & Risks: The main benefit is that each country will be able to contribute according to its capabilities and together focus on the development of new technologies or scientific advances. On the other hand, the risk would be that the countries do not agree with the use given to their funds.

Proposed Actions: make clear the use of the organization's budget, leaving aside conflicts between countries.

Concerns: standardize space education in the world's schools to make it much easier to train young people about space.

Benefits & Risks: The benefit is in how easy the topic of space becomes for the young people of the world and how they are motivated to achieve our goals in space, a risk could be the fact that in underdeveloped countries the quality of education is low and not would allow young people to be properly educated about space.

Proposed Actions: What can be done is for the International Space Organization to provide underdeveloped countries with the necessary resources for space education in their schools.

Concerns: New materials.

Benefits & Risks: New source of materials (mining on the moon/mars/asteroids) for energy (nuclear), electronics, more jobs; Risks: conflict over the owners of the materials mined, pollution from mining (example pieces of materials flying off, creating space debris).

Proposed Actions: Creating an international organisation that "owns" the materials mined countries would need to buy the materials from them, the money would be then invested in future space mining.

Concerns: Privatization of Space.

Benefits & Risks: Benefits- Increases competition and innovation Risks- potentially allows private companies to dominate exploration.

Proposed Actions: Impose regulations on companies attempting to expand into space

Concerns: Space tourism privatization.

Benefits & Risks: The growing interest in space tourism and privatization offers exciting opportunities for the expansion of human activities beyond Earth. However the unregulated growth of space tourism and privatization may lead to a surge in space debris.

Proposed Actions: Promote collaboration between governmental space agencies and private entities to ensure a balanced and environmentally conscious approach.

Concerns: Responsibilities between governments and private space companies.

Benefits & Risks: The involvement of private companies in space exploration and tourism, introduces innovation, efficiency, and competition, potentially accelerating progress. But there is a possibility that there will be a clash of interests between the governments and these companies.

Proposed Actions: Encourage international cooperation agreements to avoid unnecessary competition between private companies and governments.

Concerns: Space tourism

Benefits & Risks: It creates new jobs, but going in space is not ecological.

Proposed Actions: We could have green taxes to fund research to develop ways to travel in space with as little impact as possible on the environment.

Concerns: Space jobs.

Benefits & Risks: It creates new field of studies, but there is still risks for workers to work in space.

Proposed Actions: We could create workshops to form the workers and to create a medical assistance.

Concerns: Space tourism

Benefits & Risks: Improve the economy, open to new areas of knowledge, difficulty to access, high cost of manufacture.

Proposed Actions: Green tags, shifts, and investment in new technology

Concerns: Inequalities in space Jobs

Benefits & Risks: Lack of institutions leading to an elite an inequality during job interview and studies. Diversity of profiles could lead to creativity and new ideas to solve modern problems.

Proposed Actions: Opening a scholarship in universities that are not affiliated with a space program to help most of the people to have the opportunity to participate

Concerns: Mental Health in space.

Benefits & Risks: Having longer and longer missions in space will lead to a lack of social connections, even for the most prepared people. If we want to go to Mars and to bring more and more people to colonize it, we need actions to resolve this problem.

Proposed Actions: Establishing communication applications to talk to their family, their relatives. Using space communication to have entertainment, news and so to keep the link between the Earth and them.

Concerns: Space jobs - allocation of resources

 $\mathsf{Benefits}\ \&\ \mathsf{Risks:}$ only a few countries will explore space, leave everybody else behind and drain them of resources.

Proposed Actions: international cooperation is key, 3 phases of implementation: 1. local, 2. international, 3. Intergalactic.

Concerns: SPACE JOBS and INTERNATIONAL COLLABORATION.

Benefits & Risks: Benefits: United collaborative effort towards future in Space, Creation of novel jobs and opportunities ; Risks: Inequity/power imbalance between nations. Proposed Actions: Creation of international entity (United Space Nations/USN) acting as a neutral regulatory body ensuring the peaceful and equitable development of projects/ research/exploration of space.

Concerns: SPACE JOBS and INTERNATIONAL COLLABORATION

Benefits & Risks: Benefits: "PLANet B"- space exploration could open way to novel resources, opportunities for life; Risks: PLANet A (Earth)- Must allocate Earth's scarce resources that could otherwise be directed to address solving current issues on Earth. **Proposed Actions:** We established that space exploration and expansion of the humanity into space is a longterm effort that will need to be progressed in stages: the first stage (local) will aim to address issues directly on Earth, specifically through improving awareness and accessibility to knowledge/education/opportunities in space that would begin to establish space exploration as a new industry upon which economies can depend. The next phase (international) will foster collaboration between nations and major corporations/agencies, accelerating research and innovation through collaboration. The last phase (intergalactic) will come when humanity can finally venture into space- under regulation of the USN, based on the fair and equal input of all nations that make it up, citizens of the world will have access to "space" as an opportunity for new work and new life.

Concerns: Jobs in the space

Benefits & Risks: The people could travel and stay in the space/Contamination in the space,

Proposed Actions: Build hotels at the space.

Concerns: International collaboration

 $\mathsf{Benefits}\ \&\ \mathsf{Risks}:$ We will learn more and do better explorations/ corruption and international wars

Proposed Actions: Internacional Space Organization

Concerns: Access jobs, Benefits & Risks: opportunities economic stability, Proposed Actions: creation of a decentralized system, which allows people to have access to opportunities

Concerns: International inequality in space developments Benefits & Risks: risks: division of society Proposed Actions: Establishment of an international regulatory body (ex: United Space Nations) Concerns: The regulations Benefits & Risks: space debris and the radiation Proposed Actions: experimenting with artificial gravity

Concerns: The regulations Benefits & Risks: space debris and the radiation Proposed Actions: experimenting with artificial gravity

Concerns: Space jobs

Benefits & Risks: Benefits: more job opportunities, easier job for researchers to accommodate, a new area of growth in multiple fields. Risks: language barriers, marginalisation, sleep deprivation, minimal contact with family and friends.

Proposed Actions: Language barriers - choosing a common language to be used and making sure everyone is approximatively on the same level of understanding. Marginalisation - introducing activities in advance to improve communication and collaboration between future partners. Minimal contact with family - creating a schedule of calls for 30 minutes to one hour if not longer depending on the possibility and what works better and also the chance to also take in consideration certain family/friends events and make a arrange a call/video call to try and make them feel more involved in their loved ones lives. Sleep deprivation - planning for longer simulations, over night, and trying different methods of sleep improvement and then choosing the most affective one for each individual.

Concerns: Commercialization of Space

Benefits & Risks: (BENEFITS) free market encourages competition and innovation; (RISKS) companies may put shareholder profits over safety or other important priorities. **Proposed Actions:** use the previously-mentioned international body to recommend regulations for the member nations' host space manufacturing companies.

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