

# International Webinar Series on Future of Space Technology and Exploration

"Explore The Space" (ETS), an International NGO promoting Space Education, is pleased to present you the Webinar Series - "Future of Space Technology and Exploration" - with international experts as speakers. The webinar series seeks to emphasize the need for global cooperation in Space exploration and has been designed to benefit the youth of the World, to pursue STEM (Science, Technology, Engineering & Mathematics) Education and encourage them to take up Space Sciences & Technology as their career.

Elcon Precision LLC, founded in 1967, is an American Company based in San Jose, California, providing diverse technical services and capabilities that include Photochemical Machining, Metallization and Coating of Ceramics and Brazed Assembly Services. A direct supplier to NASA, Elcon Precision manufactures high-precision Engineering Components for Aerospace, Medical, Defense, and Space Flight Industry.

Modern Space Exploration has come a long way since the first flight of human into space by the Russian Cosmonaut Yuri Gagarin in 1961 and the landing in the Moon of the American Astronauts Neil Armstrong and Edwin "Buzz" Aldrin in 1969.

Setting up human colonies on the Moon and Mars, extracting physical resources from the Planets and the Moon, for mankind's use on earth, moving physical assets and niche manufacturing to Space are some of the driving ideas of Space Exploration today. Robotics, Machine Language, Artificial Intelligence, Ion Engines, 3D Printing, Digital X-rays are among the breakthrough technologies that are advancing Space Exploration today.

# International Webinar Series on Future of Space Technology and Exploration

Edition - 4

## Human Exploration of Outer Space - Past, Present & Future

Date: 23<sup>rd</sup> February 2022 | Time: 7.00 pm to 8.30 pm (PST, USA) | Date: 24<sup>th</sup> February 2022 | Time: 8.30 am to 10.00 am (IST)

### Inaugural Address



**Joseph Avraham**  
Consul - Trade & Economic Affairs  
Consulate General of Israel  
in Bengaluru



**Ed Tomasek, Director,**  
Business Development  
Elcon Precision LLC  
San Jose, California, USA



**Dr. Ram Prasad Gandhiraman**  
Founder & CEO  
Space Foundry Inc.,  
San Jose, USA



**D V Venkatagiri, CEO,**  
Explore The Space &  
The Global Trade Driver,  
Chennai

### Speakers

in association with

**The Global Trade Driver**

(An International Forum on Industry and Education)

### Co-Sponsors



**Who Can Register -** Research Scholars, Entrepreneurs, Senior / High School, College and University Students from all over the World and with background in Engineering, Mathematics, Physics, Chemistry, Management, Life Sciences, Astronomy, Metallurgy and Material Science, Aerospace and Aeronautics.

### Key Takeaways

1. Networking
2. Certificate for participants
3. Exposure to latest developments in Space Technologies



## Abstract of the webinar - Human Exploration of Outer Space - Past, Present & Future

1. Need for sustainable human presence after retirement of International Space Station
2. Manufacturing base in Moon to be used for any future mission
3. Issues needs to be addressed for human landing on Mars
4. Privatisation of Space and commercialization of Low earth orbit
5. Reducing travel time to Mars or Making faster Space Travel possible
6. Taking Food and Other items to Mars
7. The new space technologies of today which were not there when Neil Armstrong landed on Moon.
8. Building Infrastructure in Moon
9. Leveraging Humanity's knowledge about Moon to further travel to Mars

With continued presence of humans in the International space station (ISS) for over 21 years now and with a planned retirement of ISS, human space exploration beyond the low earth orbit is picking up momentum. Only Governments have pursued human space exploration in the past, as it was unaffordable for private players. With no business case for human space exploration, the topic continued to stay on government-funded programs. Highly ambitious government programs from various countries including that of US, India, China etc., to send humans to moon have boosted human exploration research. With private players developing both space tourism and commercialization of space, the pace of human exploration has picked up abruptly. Technologies that never existed before are being developed to lower the cost and also to sustain this independent of government support. Apart from Space tourism, In Space Manufacturing (ISM) and targeted mining activities in moon, mars and asteroids will address some of the materials and manufacturing related challenges faced on earth and also make human space exploration a necessity of the future. This talk will cover some of the major challenges associated with human space exploration and pathways for continued human presence in outer space, with a focus on technology development.