6th IAASS International Space Safety Conference
Montreal - Canada, 21-23 May 2013

PROGRAM

Tuesday 21 May 2013

08:00  Registration & Coffee

09:30  Plenary Session: Part 1
  Chairs: P. Kirkpatrick, F. Gregory

  Welcome Address:
  Paul S. Dempsey, Director Institute of Air and Space Law at McGill University

  Conference Introduction:
  Tommaso Sgobba, IAASS President

  Keynote Speakers:

  Margaret H. Woodward
  US Air Force Chief of Safety
  Commander Air Force Safety Center

  Dato’ Hayati Ismail
  The Malaysian High Commissioner to Canada

  Isabelle Rongier
  Inspector General
  Centre National d’Etudes Spatiales (CNES)

  Luisa Innocenti
  European Space Agency

  Herve Glibert
  Chief Technical Officer
  EADS Space Transportation

11:15  Coffee Break

11:45  Plenary Session: Part 2
  Chairs: F. Allahdadi, C. Felix

  Gilles Leclerc
  President Canadian Space Agency
George Nield  
FAA Associated Administrator  
Commercial Space Transportation  

Nobuo Takeuchi  
JAXA Director PA & Safety  

Michael Simpson  
Secure World Foundation Executive Director  

Edward Mango  
NASA Commercial Crew Program Manager  

**12:45 Conference Luncheon**  
Guest Speaker: Dr. Jonathan Clark  

**Session 1 Space debris and space debris removal - Part 1**  
*Chairs: M. Matney, E. Levin*  

14:00 - 15:30  

*Estimation of Lifetime for Launchers Debris in Geostationary Transfer Orbits*  
*Handschuh*  
*CNES/DLR, FRANCE*  

*Active Debris Removal Systems*  
*Retat*  
*AUSTRIUM, GERMANY*  

*The Development of Gas Rocket Engine for the Deorbit of Launch Vehicle upper Stage after the Mission*  
*Prusova*  
*Omsk State Technical University, RUSSIA*  

*Spacecraft Vulnerability to Space Debris is not an Option*  
*Bensoussan*  
*Hiscox, FRANCE*  

**Session 2 Regulations and standards for safety – Part 1**  
*Chairs: P. Dempsey, R. Jakhu*  

14:00 - 15:30  

*Search and Rescue in Space Activities: Is There a Specific Legal Regime?*  
*George D. Kyriakopoulos*  
*National and Kapodistrian University of Athens, GREECE*
The Conflict between Sustainable Space Flight and Safety
Edwards
Applied Science, Engineering and Mission Assurance, UNITED STATES

How Far is China from an International Code of Conduct for Outer Space Activities
SU
Xi'an Jiaotong University, CHINA

French Regulations applied to future European Launchers
Cahuzac
CNES, FRANCE

Session 3 Safety Critical Software Design and IVV
Chairs: I. Rongier, V. Chang

14:00 - 15:30

Tailoring Human Safety Critical Expertise for Mission Safety Critical Software Development
Boudillet
ASTRIUM, FRANCE

PRO-Elicere: A Study for create a new Process for Dependability Analysis of Space Computer Systems
Netto Lahoz
IAE, BRAZIL

Conquest of Universe with Spatial Grasp Technology
Sapaty
Academy of Sciences, UKRAINE

Analysis of Software Development Methodologies to build Safety Software Applications for SATEX-II
Aguilar
UPAEP, MEXICO

Reliability Prediction Analysis: Airborne System Results and Best Practices
Silva
Critical Software, S.A., PORTUGAL

Session 4 Human factors and performance for safety
Chairs: B. Kanki, B. Parke

14:00 - 15:30

Verification Models for Human Automation Interaction for Safety Critical Applications
Bolton
University of Illinois, UNITED STATES

Human Safety Considerations for Manned Commercial Space Flights
Antuñano
FAA, UNITED STATES
Schedule-Related Fatigue in Flight Controllers in Space Domains
Parke
SJSURF/NASA Ames Research Center, UNITED STATES

Session 5 Designing Safety into Space Vehicles – Part I
Chairs: G. Gafka, V. Chang

14:00-15:30

Human Vibration Research supporting Requirements Development for Space Launch
Adelstein
NASA, UNITED STATES

Study of the Effect of Impact Acceleration on the Crew Wearing a Full-pressurized IVA Suit during Splashdown
Suzuki
University of North Dakota, UNITED STATES

Calculating and Mitigating the Risk of a Cut Glove to a Spacewalking Astronaut
Castillo
NASA, UNITED STATES

Safety for Spacecraft Crashworthiness and Crew Survivability
Walton
Crandfield Impact Centre, UK

15:30 Coffee Break

Session 6 System & Payload Safety - Part I
Chairs: P. Kirkpatrick, M. Azeev

16:00 – 18:00

Mechanical Ground Support Equipments (MGSE) for ARSAT 1 - Hazard Analysis
Gonzalez
INVAP S. E., ARGENTINA

Designing Safety into Spacecraft Components
Kio
CRANFIELD UNIVERSITY, UK

Computer-Based Control System Safety
Currie
NASA, UNITED STATES

Commonalities and Differences in Functional Safety Systems between ISS Payloads and Industrial Applications
Malyshev  
HE Space Operation, NETHERLANDS

Unexpected Anomaly of GHF On-Board  
Kobayashi  
JAXA, JAPAN

Session 7 Organisational culture and safety  
Chairs: J. Pelton, F. Allahdadi

16:00 – 18:00

Biological planetary protection for safe solar system exploration missions, conducted either by robots or humans or both  
Rummel  
East Caroline University, UNITED STATES

Space Shuttle Columbia and Fukushima Nuclear Plant, Differences and Similarities in Organizational Accidents and LL  
Mitsui  
JAXA, JAPAN

Evolution of International Space Station Program Safety Review Processes and Tools  
Ratterman  
NASA, UNITED STATES

Lessons Learned for Space Safety from the Fukushima Nuclear Power Plant Accident  
Nogami  
JAMSS, JAPAN

Session 8 Space debris and space debris removal – Part II  
Chairs: J. Pearson, I. Rongier

16:00 – 18:00

Guidance, Navigation, and Control Techniques and Technologies for active Satellite Removal  
Ortega  
ESA, NETHERLANDS

Spacecraft Robustness to Orbital Debris: Guidelines & Recommendations  
Heinrich  
ALTRAN, PORTUGAL

Feasibility Study of Electrodynamics Tether Technology Demonstration on H-II Transfer Vehicle  
Kasai  
JAXA, JAPAN
Modelling of Crack Propagation in Spacecraft Reinforced Pressure Wall Damaged by Orbital Debris
Telichev
University of Manitoba; CANADA

Session 9 Operations safety
Chairs: F. Festa, V. Chang
16:00 - 18:00

Improving Safety on the International Space Station: Transitioning to Electronic Emergency Procedure Books
Carter-Journet,
ARES CORP., UNITED STATES

Management of Emerging Optical Safety Concerns for the International Space Station
Flores-McLaughlin
NASA JSC, UNITED STATES

ATV Edoardo Amaldi Mission “Challenging yet Successful
Chase
ESA, FRANCE

Requirements, Resource Planning and Management for Decrewing/Recrewing Scenarios of the International Space Station
Bach
Barrios Technology / NASA, UNITED STATES

Session 10 Launch safety - Part I
Chairs: C. Leveau, C. Botts
16:00 – 18:00

Uncertainty in Risk to Aircraft from Space Vehicle Operations
Larson
ACTA Inc, UNITED STATES

Launch System Danger Analysis, Methodology and Application with 3 European Launcher
Aussilhou
CNES, France

Probability of Failure Analysis Guidelines for Expendable Launch Vehicles
Wilde
FAA, UNITED STATES

Towards Observation of deorbited Upper Stage reentry for range safety
Nobuyuki IIZUKA
JAXA, Japan
Wednesday 22 May 2013

Session 11 Commercial human spaceflight safety - Part I

Chairs: A. Quinn, N. Ridzuan

08:30 - 10:30

Commercial Human Spaceflight: Self-regulation Is The Future
Sgobba
IAASS, NETHERLANDS

Safe Software for Space Applications: Building on the DO-178 Experience
Dorsey
Digital Flight Solutions, UNITED STATES

Status of the new IAASS Software Safety Standard for Commercial Suborbital Vehicles
Klicker
Techcos GmbH, GERMANY

Zero Gravity Flights as the most Effective Embryonic Operation for planned commercial Spaceport
Norul
Spaceport Malaysia, MALAYSIA

Session 12 Launch safety - Part II

Chairs: S. Wilson, T. Pfitzer

08:30 - 10:30

Application of Benefit-Risk Value Analysis on Safety and Reliability of Human Rated Launch Vehicles
Stott
NASA, UNITED STATES

Proposal of New Triggered Lightning Launch Commit Criteria for Japan's safety rocket launch
Yasuhiro Saito
JAXA, Japan

Space Regulations applied to Soyuz and VEGA Launch Systems
Cahuzac
CNES, FRANCE

Arianespace Launch Service Operator Policy for Space Safety
Jourdainne
ARIANESPACE, FRANCE

Closing the Collision Risk Gap between current Launch Collision Avoidance Protection and the standard ISS Collision Risk
Eric Schultz
NASA, UNITED STATES
Session 13 Re-entry safety – Part I

Chairs: P. Wilde, B. Lazare

08:30 - 10:30

ESA SSA Programme: The Re-entry Prediction System (RPS) of the Space Surveillance and Tracking Branch

Weikert

Astos Solutions GmbH, GERMANY

A complex variable Method to predict an Aerodynamics of Arbitrary Shape

S. Bakhtiyarov

US Air Force, UNITED STATES

A Space Debris Alert System for Aviation

T. Sgobba

ESA, NETHERLANDS

Reentry Predictions for uncontrolled Satellites: Results and Challenges

Pardini

ISTI/CNR, ITALY

Session 14 Panel Human Factors & Performance for Safety

Chairs: B. Kanki, M. Trujillo

08:30 - 10:30

Communicating for Safety in Aerospace Operations

Session 15 Regulations and standards for safety – Part II

Chairs: R. Jakhu, J. Pelton

08:30 - 10:30

Development of domestic laws and regulations for range safety, flight safety and investigation of accidents in the era of commercial passenger spaceflight

R. Lee

Schweizer Kobras, Australia

Legal Issues Relating to Active Removal of Space Debris

Chatterjee

McGill, CANADA

Traditional Space Policy vs. Commercial Space Initiatives: Seeking a Better Future in Space Safety

J. Pelton

ISSF, UNITED STATES
Hybrids in need of safety Standards: Is it Time for a Space Traffic Control Authority?
Vasilogeorgi
McGill Institute of Air & Space Law, CANADA

The legal Challenge of on-Orbit Servicing Operations: Space law as space safety contributor
Puteaux
Institut Droit de l’Espace et des Télécommunications, FRANCE

Legal Aspects of Space safety for Nuclear Powered Missions in Outer Space
Iavicoli
Institute for International Legal Studies ISGI-CNR, ITALY

10:30 Coffee Break

Session 16 Space debris and space debris removal – Part III
Chairs: M. Matney, W. Ailor

11:00 - 12:30

Orbit Propagation and Statistical Methods to address the Compliance of GTO with the French Space Operations Act
Le Fevre
CNES, FRANCE

Net Capture System for Active Debris Removal
Retat
ASTRIUM, GERMANY

A Business Case For Space Debris Removal in LEO
Sule
National Space Research and Development Agency, NIGERIA

Propagation of Surface-To-LEO Vortex Rings for Orbital Debris Management
Matthew Noyes
University of Rochester, UNITED STATES

Session 17 Nuclear safety for space systems
Chairs: S. Bakhtiarov, G. Kminek

11:00 - 12:30

Inherently Safe Fission Power System for Lunar Outposts
El-Genk
University of New Mexico, UNITED STATES

LBLOCA Analysis of a Space Thermionic Reactor: TOPAZ-II
Hu
China Institute of Atomic Energy, CHINA
Legal and Regulatory Obstacles to Nuclear Fission Technology in the Space Domain
Force
Loyola Law School, UNITED STATES

Session 18 Designing Safety into Space Vehicles – Part II
Chairs: A. Menzel, G. Gafka

11:00 - 12:30

Reliability and Maintainability (R&M) Role in Designing for Safety and Affordability
Safie
NASA, UNITED STATES

GMES SENTINEL-3: A Safer Satellite for a Safer Space, a Safer World
Heinrich
ALTRAN, PORTUGAL

Rapid Prototyping of Universal Access Transceiver (ADS-B) for Commercial Space Flight Operations
Demidovich
FAA, UNITED STATES

Failure Tolerance - Lessons Unlearned
Riley
NASA/ARES Corporation, UNITED STATES

Session 19 Regulations and standards for safety – Part III
Chairs: R. Lee, T. Masson-Zwaan

11:00 - 12:30

Legal Challenges of Active Space Debris Removal
Masson-Zwaan
Leiden University, NETHERLANDS

Impact of the New Optional Rules for Resolution of Space Debris Controversies
Force
Loyola Law School, UNITED STATES

Legality of Non-Cooperative Satellite Removal
Li
China University of Political Science and Law, CHINA

Regulation of Small and Micro Satellites
Jakhu
McGill, CANADA

Safety Standards for Outer Space Activities
Larsen
Session 20 Probabilistic risk assessment
Chairs: W. Lyles, L. Ren
11:00 - 12:30

Real Time Fire Reconnaissance Satellite Monitoring System Failure Model
Niño Prieto
BUAP., MEXICO

Probability Risk Assessment Methodology usage on Space Robotics
D’Silva
MacDonald, Dettwiler and Associates Inc., CANADA

Quantitative Risk Modeling of Fire on the International Space Station
Castillo
NASA, UNITED STATES

FMECA an Underutilized Safety, Reliability and System Engineering Tool
Mullin
CSA, CANADA

12:30 Lunch & IAASS General Assembly

Session 21 Panel Space Debris Risk for Aviation
Chairs: P. Wilde, F. Alby
14:00 - 15:30

Session 22 Designing Safety into Space Vehicles – Part III
Chairs: W. Lyles, R. Nasca
14:00 - 15:30

Development of STPA Template for Satellite System Safety Analysis and Analysis of Safe Integration of Modular Payloads
Dunn
MIT, UNITED STATES

Failure Modes and Effects Analysis (FMEA) Assistant Tool Feasibility Study
Flores
NASA, UNITED STATES

Designing Safety into Space Vehicles during early Concept Formation and Architectural Design
Ujiie
JAXA, JAPAN
Session 23 Commercial human spaceflight safety - Part II
Chairs: A. Quinn, J-B. Marciacq

14:00 - 15:30

Establishing a Regulatory Framework for the Development & Operations of Sub-Orbital & Orbital Aircraft (SOA) in the EU
Marciacq
EASA, GERMANY

Crew Escape Lessons Learned from a Stratospheric Freefall Parachute Flight Test Program
Clark
Center for Space Medicine, Baylor College of Medicine, UNITED STATES

Astronaut and Spaceflight Participant Healthcare and Space Medicine for Commercial and Non-Commercial Spaceflight
Lüthen
ERASMUS, NETHERLANDS

The Design and Operation of Suborbital low Cost and low Risk Vehicle to the Edge of Space (solves)
Norul
Spaceport Malaysia, MALAYSIA

Session 24 Panel Space Safety Education
Chairs: M. Kezirian, J. Pelton

14:00 - 15:30

Session 25 Launch safety – Part III
Chairs: D. Mikula, C. Moura

14:00 - 15:30

Uncertainty and Significant Figures for Public Launch Risk Estimates
Wilde
FAA, UNITED STATES

Overall Control on Solid Rocket Motor Hazard Zone: Example of VEGA an innovative Solution at System Level
Vertueux
CNES/CSG, FRENCH GUIANA

Flight Termination Criteria
Haber
ACTA, Inc., UNITED STATES

Synthesis of the SRM Fragmentation Activities performed within VEGA Program
Jarry
CNES, FRANCE
Flight Termination System Management and Adaptation to a new multi Space Launch Vehicles Context
Trinchero
CNES, Guiana Space Center, FRANCE

15:30 Coffee Break

Session 26 Space debris and space debris removal - Part IV
Chairs: I. Rongier, W. Ailor

16:00 - 18:00

Active Space Debris Removal using Modified Launch Vehicle Upper Stages Equipped with Electrodynamic Tethers
Nasseri
SGAC, CANADA

Helios1A EoL: a Success. For the first Time a long final Thrust Scenario, respecting the French Law on Space Operation
Guerry
CNES, FRANCE

ADR Concepts from CNES funded Study OTV
Pisseloup
EADS, FRANCE

Re-entry Analysis Comparison with different Solar Activity Models of spent U/S using ESA DRAMA and TLE Predictions
David
DLR, GERMANY

Session 27 Commercial human spaceflight safety - Part III
Chairs: T. Sgobba, A. Quinn

16:00 - 18:00

IAASS Suborbital Safety Technical Committee - Summary of Proposed Standards & Guidelines
Quinn
IAASS Suborbital Safety TC, UK

NASA's Commercial Crew Program, the Next Step in U.S. Space Transportation
Mango
NASA, UNITED STATES

FAA Development of Guidelines to Promote the Safety of Occupants of Commercial Launch Vehicles
Repcheck
FAA, UNITED STATES
Human, Machine, Nature and Safety Factors in the Design and Architecture of Spaceflight Terminal at Spaceport Malaysia
Ati Rosemary Mohd Ariffin
University of Malaysia, MALAYSIA

Session 28 Re-entry safety – Part II
Chairs: R. Nasca, P. Wilde

16:00 - 18:00

Comparison of Reentry Breakup Measurements for Three Atmospheric Re-entries
Feistel
The Aerospace Corporation, UNITED STATES

DEBRISK, CNES Tool for re-entry Survivability Prediction: Validation and Sensitivity Analysis
Omaly
CNES, FRANCE

Spacecraft Atmospheric Re-entry Observation Campaigns: Lessons Learnt & Next Steps
Trujillo
ESA, NETHERLANDS

OPERA - a CNES Tool to Monitor Short and Middle Term Uncontrolled Re-entries Using Mean Theories
Dolado Perez
CNES, FRANCE

Session 29 Safety risk management
Chairs: F. Festa, G. Gafka

16:00 - 18:00

SAFETY Parameter Management in ASTRIUM
Meredith
ASTRIUM, FRANCE

Risks, Safety and Surety
Offiong
Politecnico di Torino, ITALY

Safety Risk Management for the Emerging Commercial Suborbital Space Industry
Verstraeten
National Aerospace Laboratory NLR, NETHERLANDS

Sustaining a Mature Risk Management Process: Ensuring the International Space Station for a Vibrant Future
Session 30 System & Payload Safety - Part II  
Chairs: J. Jeevarajan, M. Malyshev

16:00 - 18:00

Safety Assessment for Secondary Payloads launched by Japanese Expendable Launch Vehicle  
Miki  
JAXA, JAPAN

Hazard Control & Crew Interaction  
Hellinckx  
QinetiQ Space nv, BELGIUM

Payload Safety: Risk and Characteristic-based Control of Engineered Nanomaterials  
Abou  
University of Minnesota Duluth, UNITED STATES

The X-ray(s) Protection Design of the Material Science Rack with Respect to Safety Assurance  
Liu  
Technology and Engineering Center for Space Utilization, Chinese Academy of Science, CHINA

Global Precipitation Measurement (GPM) Safety Inhibit Timeline Tool  
Dion  
Mantech International, UNITED STATES

19:30  IAASS Conference and Awards Gala Dinner

Thursday 23 May 2013

Session 31 Space materials safety  
Chairs: G. Ruff, M. Orlandi

08:30 - 10:30

Numerical Study of Flame over an electric Wire in Microgravity  
Jajoo  
IIT-BHU, INDIA

Ground Measures to ensure the Material Safety of Spacecraft in Orbit  
Shen  
Beijing Institute of Spacecraft Environment Engineering, CHINA

Comparison and Characterization of NiTi and NiTiCu Shape Memory Alloys  
Savas Dilibal  
Huseyin Adanir Marmara University/Engineering Faculty, TURKEY
Session 32 Re-entry safety - Part III
Chairs: F. Alby, J. Pearson

08:30 - 10:30

Risk Assessment during the Final Phase of an uncontrolled Re-Entry
Gaudel
CNES, FRANCE

An Early Study of Disposal Options for the Hubble Space Telescope
Scott Hull
NASA, UNITED STATES

Study of Spacecraft Elements Surviving an Atmospheric Re-Entry
Durin
CNES, FRANCE

Session 33 Safety on long duration human spaceflight missions
Chairs: V. Chang, T. Sgobba

08:30 - 10:30

Spaceflight vs. Human Spaceflight
Barr
The Aerospace Corporation, UNITED STATES

The Devil within - A Tale about Computers, Experts and Confusion
Bittner
Astrium Space Transportation, GERMANY

Performance and Safety of Pouch Lithium-ion Cells in a Space Environment
Jeevarajan
NASA, UNITED STATES

Active Magnetic Shielding for Long Duration Manned Space Missions
Burger
University of Perugia, ITALY

Session 34 Space traffic control
Chairs: E. Mooij, D. Finkleman

08:30 - 10:30

NEOPROP: a NEO Propagator for Space Situational Awareness
Zuccarelli
Astos Solutions, GERMANY

Application of Use Case Scenarios to analyse Needs on the Future European SSA Governance and Data Policy
Valero
European Union Satellite Centre, SPAIN

Conjunction Detection and Orbit Life Time of Geosynchronous Transfer Orbital Debris
Han
National Space Science Center, CHINA

CAESAR : An Initiative of Public Service for Collision Risks Mitigation
Moury
CNES, FRANCE

Space Situational Awareness: It's Not Just About the Algorithms
Schonberg
Missouri University of Science & Technology, UNITED STATES

CNES Strategic Plan for Space Traffic Control
Alby
CNES, FRANCE

Session 35 Environmental impacts of space operations – Part I
Chairs: S. Wilson, J. Trinchero

08:30 - 10:30

ESA Clean Space Initiative
Innocenti
ESA, FRANCE

Influence of Space Environment Synergistic Effect on Spacecraft Safety
Shen
BEIJING, CHINA

Cyclone-4 in Alcantara: Building Safety with environmental Responsibility
Moura
Alcantara Cyclone Space (ACS), BRAZIL

Large-eddy Simulation of a Booster Jet: Towards a better Prediction of the Impact of Rockets on the Atmosphere
Champesteing
CNES, FRENCH GUIANA

15:30    Coffee Break

Session 36 Environmental impacts of space operations – Part II
Chairs: K-U. Schrogl, C. Moura

11:00 - 12:30
Safety and Environment - Masterplan 2020 of DLR’s Rocket Test Center Lampoldshausen
Dommes
DLR, GERMANY

Sea Areas Protected for Environment: A Constraint taking into Account in the French Space Operations Act
Louvel
CNES, FRANCE

Environmental Studies at the Guiana Space Centre
Richard
CNES/CSG, FRENCH GUIANA

Session 37 Re-entry safety – Part III
Chairs: P. Wilde, M. Trujillo
11:00 - 12:30

Brake up Models and Simulations of an Asteroid Hit to Earth
Ortega
ESA, NETHERLANDS

POPSCAN: a CNES Geo-Information Study for re-entry Risk Assessment
Fuentes
CNES, FRANCE

Risk Analysis on Human Health and Environment induced by Spacecraft Elements Surviving an Atmospheric Re-Entry
Combes
CNES, FRANCE

Results of the IAASS Re-entry Analysis Test Campaign 2012
Lips
HTG GmbH, GERMANY

Session 38 Space debris and space debris removal - Part V
Chairs: E. Levin, H. Klinkrad
11:00 - 12:30

The Cost of Future Collisions in LEO
Levin
STAR, Inc UNITED STATES

Passivation Techniques for future Spacecrafts to comply with French Space Operations Act
Cazaux
CNES, France
Legal and Regulatory Challenges of Active Debris Removal and On-Orbit Satellite Servicing Activities
Nyampong
McGill, CANADA

Telecom 2 End of Life Operations - Moving Stakes, Solutions and Reality
Varinois
CNES, FRANCE

Session 39 Panel session Human Factors and Performance for Safety
Chairs: B. Kanki, M. Antunano
11:00 - 12:30

Ground Processing Human Factors for the Space Launch System
and Orion Multi Purpose Crew Vehicle

Session 40 Panel session Commercial Human Spaceflight
Chairs: A. Quinn, E.Mango
Is Self-Regulation the Way of the Future?
11:00 - 12:30

12:30 Lunch Break

14:00 Plenary Session: Part 1
Preventing biological contamination during exploration missions
Dr. Gerhard Kminek, ESA

14:45 Plenary Session: Part 2
Status of Chinese human exploration program
TBD

16:00 Plenary Session: Part 3
Conference conclusions and announcements
T. Sgobba, IAASS President

16:30 Conference ends

Poster session:
Space Debris : Threat in Space

Kaushal

Institute of Science & Technology, Klawad, Haryana, INDIA

Stranded in Space - Coping with a Loss of a Space Craft

Mohan

Founder President Space Tourism Society Indian Chapter, India

Ensuring Safety against G Forces, Cosmic Radiation, Zero G Health Problems and Emergency

Mohan

Founder President Space Tourism Society Indian Chapter, India