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International Astronautical Federation News

Connecting @ll Space People

2/2017 (May 2017)

President's Welcome

Dear Colleagues,

This edition of our newsletter comes out just before one of the year's most important events: the Global Space Exploration Conference in Beijing, organized in partnership with the Chinese Society of Astronautics - CSA. We are particularly pleased with the successful programme of this gathering, which is attracting huge interest from throughout the world space community. Especially the exclusive technical site visits to the China Academy of Space Technology - CAST, the China Academy of Launch Vehicle Technology – CALT, and the Heavy Launch Vehicle base in Tianjin. You will find here all you need to know regarding the Opening Event, the plenaries and keynote lectures, the technical programme, the venue, accommodation, gala dinner, etc. Meanwhile, preparations continue to advance for IAC 2017 in Adelaide, Australia, as witnessed by the busy agenda of our technical committees and the number of papers selected at this year's Spring Meeting, the details of which you will find in this issue.

Best wishes for the summer and see you soon in Beijing for #GLEX2017

Enjoy your reading!

Dr. Jean-Yves Le Gall

IAF President

IN THIS ISSUE

IMPORTANT DATES 2017:
- GLEX 2017 – **6-8 June 2017**
- IAC 2017 – **25-29 September 2017**

Alliance Programme

Platinum

Gold

Silver

Bronze

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International Astronautical Federation

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IAF Spring Meetings

As each year, the IAF Community gathered during its Spring Meetings in Paris, France for three days, from 21 – 23 March 2017.

Have a look at the IAF Spring Meetings Photos!




Check the GNF and IDEA events videos





GLEX 2017

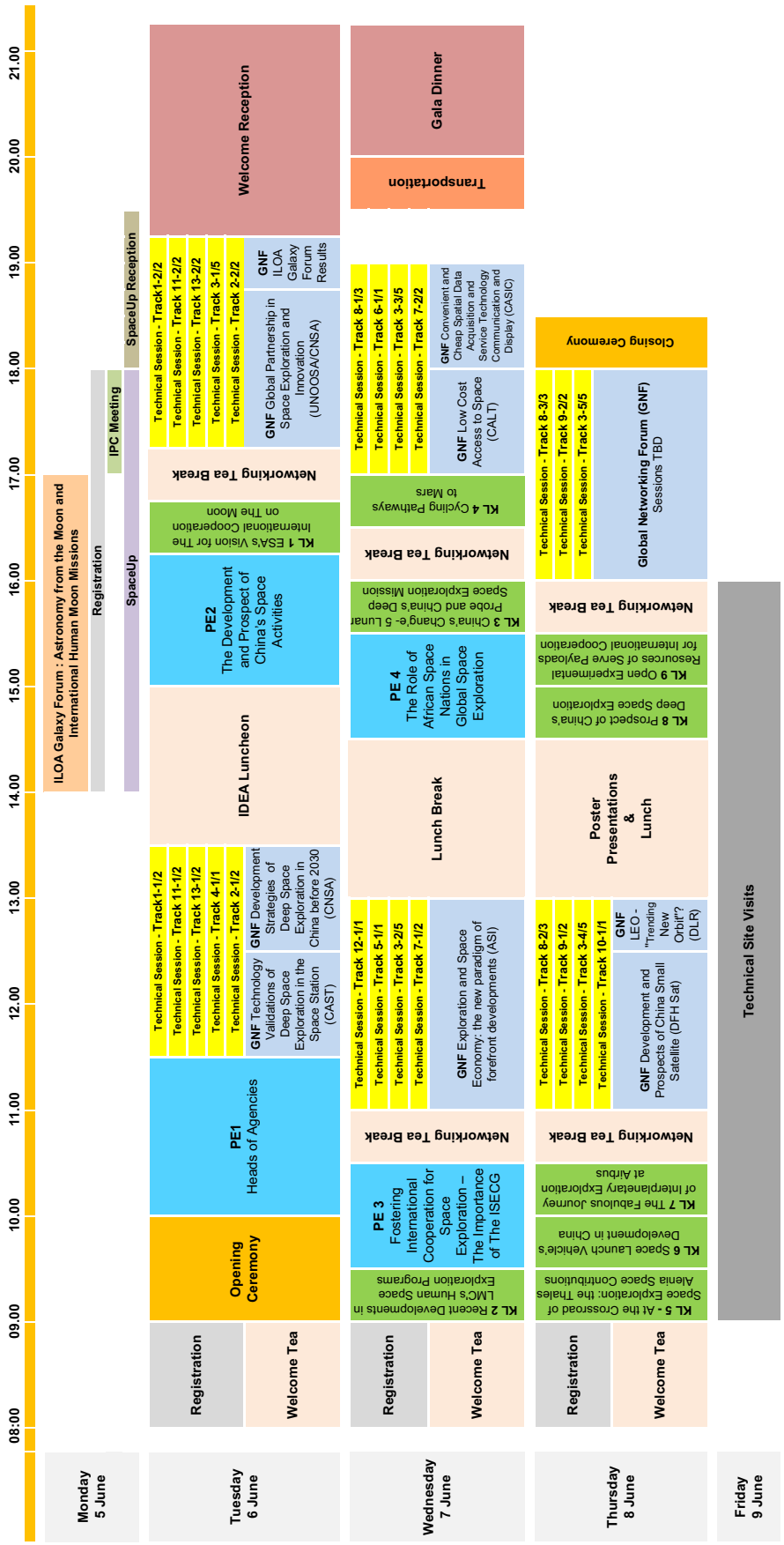
The time has arrived! GLEX 2017 will bring together leaders and decision-makers within the science and human exploration community – engineers, scientists, entrepreneurs, educators, agency representatives and policy makers.

Find below the full programme where delegates will discuss recent results, current challenges and innovative solutions.

Click here at have a look to the GLEX 2017 Final Programme

Check for more news on our Social Media

GLEX 2017 AT A GLANCE



#GLEX2017 will have 4 exciting Plenaries:

1. **The Heads of Agencies** Plenary event is one of the highlight of GLEX2017, bringing together the leaders of the major space agencies worldwide. The Heads of Agencies Plenary will focus on the theme "Global Space Exploration". The Plenary will be kicked-off with the Heads of Agencies briefly presenting the main developments within their Agencies: major decisions taken; major projects launched and major developments for the next years. The moderator will then run the discussion on Space Exploration and, to conclude an interactive Q&A session with the audience is foreseen.

2. **Host Plenary – The Development and Prospect of China's Space.** China's space industry has developed rapidly and the space activities have played increasingly a more and more important role in China's economic and social development.This plenary will bring together distinguished experts from local and abroad to introduce China's developments in major space program, including manned spaceflight, lunar exploration, the Beidou Navigation System and high-resolution earth observation system, and substantial achievements in space science, technology and applications, and addresses.This plenary will also address China's major future tasks and key areas for future cooperation and envision China's comprehensive plan in the future. The plenary will also address international cooperation for a comprehensive, coordinated and sustainable development of world's space industry.

3. **Fostering International Cooperation for Space Exploration – The Importance of The International Space Exploration Coordination Group.** 15 Space Agencies (ASI, CNES, CNSA, CSA, CSIRO, DLR, ESA, ISRO, JAXA, KARI, NASA, NSAU, Roscosmos, UAESA, UKSA) are active participants in the International Space Exploration Coordination Group (ISECG), an inter-agency coordination forum to advance the implementation of individual and collective space exploration. The ISECG was formed in 2007 in response to the Global Exploration Strategy (GES). ISECG is best known for the development and maintenance of the Global Exploration Roadmap (GER). This roadmap describes a common view of participating agencies for advancing, in a step-wise manner, the implementation of the GES.The GER is used today as a reference document for international space exploration, providing common goals and objectives, information on plans for the near-term mission scenarios and the status of human exploration preparatory activities of ISECG participating agencies. The GER provides an important source of information for industry, academia and research institutions and has been taken note of at political level, including at the meetings of the International Space Exploration Forum (ISEF) which was last held in January 2014 upon the invitation of the US government.The plenary session will highlight past ISECG achievements and current activities and provide perspectives in fostering global cooperation for space exploration among participating ISECG space agencies.

4. **The Role of African Space Nations in Global Space Exploration.** Winning the battle of convincing their governments to invest in space technology and applications has been a great achievement for African space nations. The governments of these space authorities continue to fund space programmes dependent on the support the programmes provide to government activities, more so to activities around socio-economic benefits/challenges and development. As these African space nations advance, they draw experience and enthusiasm from the faring space nations, proving that international cooperation is key in advancing any space programme. The difference between space programmes of emerging space nations and those of faring space nations is evident in the maturity of their programmes and the progressive discussions on space exploration projects and the implementation thereof. Space exploration projects are capital-intensive!

And 9 interesting Keynote Lectures:

1. ESA's Vision for The International Cooperation on The Moon by Jan Woerner, Director General of the European Space Agency (ESA)
2. Recent Developments in Lockheed Martin's Human Space Exploration Programme by Robert Chambers, Program Strategy Lead for Orion Production and Danielle Richey, Advanced Programs Exploration Architect at Lockheed Martin Space Systems Company
3. China's Chang'e-5 Lunar Probe and China's Deep Space Exploration Mission by SUN Weigang, Chief Engineer at the China Aerospace Science and Technology Corporation
4. Cycling Pathways to Mars by Buzz Aldrin, Apollo 11 Astronaut
5. At the Crossroads of Space Exploration: the Thales Alenia Space Contributions by Roberto Provera, Director New Initiatives & Customer Solutions Development Thales Alenia Space
6. Space Launch Vehicle's Development in China by LU Yu, Director of Science and Technology Committee, China Academy of Launch Vehicle Technology (CALT)
7. The Fabulous Journey of Interplanetary Exploration at Airbus by Didier Morançais, Head of Sales – Science & Exploration, Airbus Defence & Space
8. Prospect of China's Deep Space Exploration by ZHANG Rongquiao, Chief engineer of Lunar Exploration and Space Engineering Center at the China National Space Administration (CNSA)
9. The Open Experimental Resources of Serve Payloads for International Cooperation Onboard Space Station by WEI Chuanfeng, Deputy Chief Director of Tiangong-2 Space Laboratory at China Academy of Space Technology (CAST)

Global Networking Forum (GNF) Programme

The Global Space Exploration Conference includes an exciting Global Networking Forum (GNF) Programme, touching upon the most recent and hot topics in Space Exploration. With a total of 9 sessions, the GNF at GLEX2017 will give participants the opportunity to be updated on recent developments and future endeavors in Space Exploration.

Amongst the topics discussed, will be the following:

Tuesday 6 June

- Research on Technology Validations of Deep Space Exploration in the Space Station – Organised by: China Academy of Space Technology (CAST)
- Development Strategies and Scientific Objectives of Deep Space Exploration in China before 2030 – Organised by: Lunar Exploration and Space Program Center, National Astronomical Observatories, Chinese Academy of Sciences
- Global Partnership in Space Exploration and Innovation – Organised by: United Nations Office for Outer Space Affairs (UNOOSA) and the China National Space Administration (CNSA)
- ILOA Galaxy Forum China 2017 - Results - International Lunar Observatory Association (ILOA)

Wednesday 7 June

- Exploration and Space Economy: the New Paradigm of Forefront Developments – Organised by: Italian Space Agency (ASI)
- Low Cost Access to Space – Organised by: China Academy of Launch Vehicle Technology (CALT)
- Convenient and Cheap Spatial Data Acquisition and Service Technology Communication and Display – Organised by: Beijing Aerospace TITAN Technology Co., LTD - China Aerospace Science & Industry Corp (CASIC)

Thursday 8 June

- Development and Prospects of China Small Satellite – Organised by: DFH Satellite Co., Ltd
- Low-Earth Orbit (LEO) - The "Trending New Orbit" for the Future of Manned Spaceflight? – Organised by: German Aerospace Center (DLR)

Technical Programme

For this year's Global Space Exploration Conference we have an exciting Technical Programme that awaits you. In total there are 329 accepted abstracts from 22 different countries. These abstracts will either be presented in one of our 25 Technical Sessions or as a Poster presentation.

There will be a dedicated Poster and Cocktail Reception on Thursday 8 June 13:00-14:30. Almost 100 posters are expected to be presented. This will be a great opportunity to network and to discuss with the authors.

TECHNICAL TRACKS

1. Scientific Objective and Infrastructure of Space Exploration

Then novel scientific objective and method of space exploration have being suggested and discussed through the critical assimilation of the old. This session will cover the new ideas of near future manned missions of the Moon and deep space, as well as the new sciences and technologies. The results from long period demo experiments on the Earth are also the hot topics.

2. Space Laboratory, Space Station and Space Exploration

Space stations are a stepping stone for and key element of human space exploration. This session will cover technology developments for existing space stations and instrumentation development to further improve technologies and prepare for future exploration. This also includes operational aspects as well as future concepts for space stations in LEO and beyond.

3. Lunar Exploration

The Moon is a key destination in the near term plans for international and commercial space exploration over the coming decade. This track presents recent lunar mission results; upcoming planned robotic lunar missions; analyses, simulations & technology preparations;

and views forward to near term human exploration of cislunar space and the lunar surface. The track illustrates an unprecedented diversity in lunar exploration today, from the growing number of national endeavours to the exciting emergence of commercial lunar enterprise that together promise to dramatically shape the future of modern lunar and planetary space exploration.

4. Exploration of Near Earth Asteroids

Near Earth Asteroids are of great interest for science, exploration, mitigation of possible threat to Earth and resources utilization (mining). They are explored now and in the coming years with multiple robotic missions from several nations. This session will cover science, instruments and technologies for Asteroid missions including expected experiments. Papers on exploration, impact mitigation, flight dynamics in the low-g environment and scientific topics are welcome.

5. Mars Exploration

The exploration of Mars is in the strategic agenda of all the spacefaring nations. Multiple robotic missions are on-going and others are planned in the years to come to prepare for the human exploration of the planet. This session will present the main results of the on-going missions and the scientific and technology missions' objectives and architectures of the near-term missions planned at international level.

6. Exploration of Other Destination

While more unknown worlds were explored, there are more new unknowns coming up for further exploration. New destinations including Venus, icy moons and planets beyond our solar system will need new methods and technologies. We expect that track 6 will inspire new ideas for future exploration and make that happen in the future.

7. Entering into Space and New Energy and Propulsion Technology

The ability of entering into space is the basis of space exploration. The new energy and propulsion technology are strong supports to entering space and space exploration. This track will cover expendable launch vehicles, reusable launch vehicles, new concepts of space transportation system, advanced propulsion and energy technologies. The innovative concepts are welcome particularly.

8. Key Technology of Space Exploration

The Track addresses examination and identification of key elements of space exploration missions, especially those driven by advanced technologies and innovations. Papers are solicited that address how to shape the future subsystems, technologies, innovations, logistics, processes, procedures, etc. to enable or significantly improve future human and robotic space mission objectives. Also, lessons learned from past missions and their application to future missions are essential topics in this Track.

9. Challenges of Life Support/Medical Support for Manned Space Exploration

The Technologies for Life Support and Medical Support is crucial for the Manned Space Exploration where the support or logistics from the ground is significantly difficult. In this session, the status of a variety of technologies for this area such as Technology and System for Life Support, Medical Support for the Passengers of Exploration Missions, Health and Efficiency of Mankind, Reduce the Risks of Flights, and Improve the Living Quality will be presented from the world-wide researchers.

10. Values and New Models for Space Exploration

The emergence of private sector initiatives in space exploration is triggering a debate on the role of public versus private sector in advancing the global space exploration undertaking. While commercial space is driven by profit-motivations and clearly established business cases, investments in public space exploration are generally justified by the generation of broader societal benefits. This track provides insights into benefit management practices implemented by space agencies and more broadly the economic dimension of space exploration. Future space exploration visions building on the co-existence and inter-relation between commercial, public and philanthropic initiatives are presented.

11. Law Issues and Public Awareness Related to Space Exploration

The session will discuss the international space cooperation and legal supervision concerning to space exploration,including space natural resources exploration, satellite navigation and low-orbit flight.at the same time, the session will sumarise the space technology development.space industry development and space ethic in 60 years' space exploration.

12. International Cooperation for Space Exploration

International Cooperation is increasingly prevalent in human and robotic space exploration endeavors. As missions become more complex, international cooperation is strengthening as a way to accomplish exploration objectives for a broader set of stakeholders. This session will explore how international cooperation can be used to further both government and private sector interests in space exploration.

13. Small Satellites

Compared with larger satellite, the features of small satellite are advanced, fast, cheap and responsive. Their use is very wide, and their commercial operation has been achieved in various domains such as communication, earth observation and science. Small satellites are now an efficient and attractive solution for space exploration, where they can either perform valuable missions autonomously, or be used as auxiliaries to enhance the results of a main – larger – spacecraft. This track will focus on new concepts of space exploration using small satellite, constellation or formation and related technologies, including missions for deep space exploration and manned space missions. The commercialization and application scenario will be also be discussed.

IDEA 3G Diversity Luncheon

Tuesday 6 June 2017, 13:30 –15:00

Venue, Main event: Li Jiang Room, 2nd Floor, Beijing Continental Grand Hotel
Venue, Live Transmission: Grand Ballroom, 2nd Floor, Beijing Continental Grand Hotel
Venue, Live Transmission: Cafe Restaurant, 1st Floor, Beijing Continental Grand Hotel

One of the key objectives of IAF President Dr. Jean-Yves Le Gall's IAF Global Innovation Agenda 2016 – 2019 is the fostering of the principle of 3G (Geography – Generation – Gender) Diversity within the Federation and the space sector. To that end, an **International Platform for Diversity and Equality in Astronautics (IDEA)** has been created which allows the Federation to take a leading role in the effort to promote and advance diversity and equality principles amongst a global space community, become an exemplary organisation in terms of geographical, generational, gender and any other diversity aspects, and live up to its motto ***Connecting @ll Space People***.

Following several very successful IAF IDEA "3G" Diversity events held during the past months, the IAF in close cooperation with the **Chinese Society of Astronautics (CSA)**, an IAF member and Alliance Partner, will hold an **IDEA 3G Diversity Luncheon** during the Global Space Exploration Conference GLEX 2017 in Beijing.

Jean-Yves Le Gall
President
International Astronautical Federation (IAF)

YANG Baohua
Vice President
China Aerospace Science and Technology Corporation (CASC)

All GLEX 2017 delegates, including Chinese and international students, young professionals, engineers, scientists, space leaders and VIPs are invited to participate. The Luncheon will be moderated by **Dr. Jean- Yves Le Gall**, IAF President. Highlights of the event will be a Keynote by **Mr. YANG Baohua**, Chair of Local Organizing Committee, Vice President of Chinese Society of Astronautics and Vice President of China Aerospace Science and Technology Corporation on **"The 3G Contribution of China's Space Development"**, and remarks by

Speakers:

Roberto Battiston
President
Italian Space Agency (ASI)

Pascale Ehrenfreund
Chair of the Executive Board
German Aerospace Center (DLR)

Sergey Krikalev
Executive Director for Piloted Spaceflights
ROSCOSMOS

Valanathan Munsami

Chief Executive Officer
South African National Space Agency (SANSA)

Randall E. Sweet

Director of Strategy and Business Development for Civil Space
Lockheed Martin Space Systems Company

Jan Woerner

Director General
European Space Agency (ESA)

YANG Liwei

Deputy Director General
China Manned Space Agency

IAF's first IDEA 3G Diversity video will be presented to the audience for the first time. Plenty of networking time and the opportunity to exchange with top-level space leaders will make this event an excellent opportunity to bring IAF's mission of ***Connecting @ll Space People*** to life.

The IAF has openened a dedicated e-mail address diversity@iafastro.org to which comments, remarks and suggestions can be addressed.

Interview with Chris Welch

Chris Welch

IAF Vice President for Education and Workforce Development / SpaceUp GLEX Chair International Astronautical Federation (IAF)

SPACEUP AT GLEX 2017

What is an unconference?

An 'unconference', an event in which the delegates themselves decide what is presented and talked about. Before an unconference, a basic framework ('the Grid') is decided on by the organisers. On the day, participants arrive and propose talks, discussions and activities they think will be of interest and which will stimulate interaction and debate. Unconferences sometimes use of social media and are frequently video-streamed live. Unconferences are intended to be real-time, collaborative, engaging and innovative.

Can participants prepare beforehand? If yes, how?

If there is a topic that a participant wants to talk about then they can prepare a presentation in one of the two formats - either a quick five-minute talk or a longer fifteen minute one. They should also practice giving their talk - time-limits are strongly enforced to keep the SpaceUp on schedule. On the day, they should be ready to put to their talk/activity on the Grid as soon as it opened.

Why is it important to attend SpaceUp GLEX2017?

SpaceUp GLEX offers anyone who wants the opportunity to present their topic to a young and engaged audience. It is a dynamic and interactive activity which allows many ideas to be exchanged in a short period of tie and for new one to be produced through discussion and networking.

GALA DINNER

Wednesday 7th June 2017, 19:30 – 22:00

The Gala Dinner will take place at the Grand Mansion (Beijing) Restaurant – A20, South Capital Stadium Road, Haidian District, Beijing – please click here for more information.

The ticket price (including VAT) is € 80,00 or 600 Yuan on site.
If you wish to purchase your Gala dinner ticket, please select this option while registering yourself or buy it on-site at the GLEX2017 registration desk.

GLEX 2017 Technical Site Visits

Friday 9th June 2017, 09:00 – 18:00

The Ticket price per one Technical Site Visit (including VAT) is €20,00
There are three Technical Site Visits:

- China Academy of Space Technology (more information here)
- China Academy of Launch Vehicle Technology (more information here)
- Tianjin Industrial Park, China Academy of Launch Vehicle Technology (more information here)

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CHINA AEROSPACE SCIENCE & INDUSTRY CORP.

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中国航天科工信息技术研究院
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Academy of Aerospace Solid Propultion Technology

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China Academy of Space Technology

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HIWING TECHNOLOGY ACADEMY OF CASIC

航天推进技术研究院
Academy of Aerospace Liquid Propulsion Technology

中国航天科工运载技术研究院
THE VEHICLE TECHNOLOGY ACADEMY OF CASIC

四川航天技术研究院
Sichuan Academy of Aerospace Technology

中国航天科工动力技术研究院
The Power Technology Academy of China Aerospace Science & Industry Corporation

上海航天技术研究院
Shanghai Academy of Spaceflight Technology

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China Academy of Aerospace Electronics Technology

中国航天空气动力技术研究院
China Academy of Aerospace Aerodynamics

中国航天系统科学与工程研究院
China Aerospace Academy of Systems Science and Engineering

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IAC 2017

2417 Abstracts accepted from 67 different Countries!

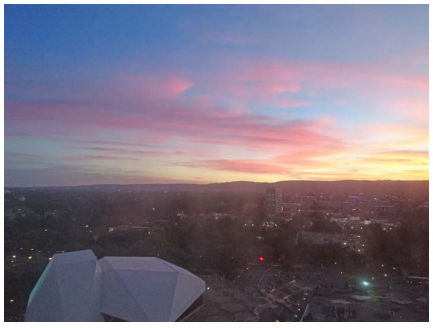
The abstract selection process is now closed and all authors have been notified about the results. **2417 abstracts** have been accepted of the 3417 that was submitted. Of these abstracts 1911 are accepted for an oral presentation and 506 are accepted for an interactive presentation.

All abstracts accepted for the congress will be presented as either oral or as interactive presentations. As usual they will be published in the IAC proceedings and in the IAC Paper Archive. **New** for this year is that the IAC papers will also be indexed in the largest cited reference enhanced multidisciplinary databases: Elsevier's **SCOPUS** and **Compendex.**

Thank you for your contributions to create an exceptional technical programme!

If you need any more information or have any questions, please do not hesitate to contact us at support@iafastro.org

IAC 2017 Plenaries and Highlight Lectures



HIGHLIGHT LECTURES

Highlight Lecture 1: Flight by Light with Bill Nye LightSail™ & Innovations in Solar Sailing
Tuesday 26 September 2017, 17:45 - 18:45
Location: Adelaide Convention Center – Hall C

Highlight Lecture 2: Next Generation On-Orbit Satellite Servicing and Refueling Programs
Wednesday 27 Sepember 2017, 17:45 - 18:45
Location: Adelaide Convention Center – Hall C

Highlight Lecture 3: The Great Barrier Reef Assessing its Health from Space
Thursday 28 September 2017, 17:45 – 18:45
Location: Adelaide Convention Center – Hall C

PLENARY EVENTS

Plenary 1: Heads of Agencies
Monday 25 September 2017, 13:30 – 15:00
Location: Adelaide Convention Center – Hall C

Plenary 2: The Space Industry's Economic and Social Impact
Monday 25 September 2017, 18:15 – 19:30
Location: Adelaide Convention Center – Hall C

Plenary 3: Space Traffic Management – Global Challenge to Protect Strategic Domain of Space
Tuesday 26 September 2017, 08:30 – 09:30
Location: Adelaide Convention Center – Hall C

Plenary 4: 50 Ways to Leave Your Earth
Tuesday 26 September 2017, 13:30 – 14:30
Location: Adelaide Convention Center – Hall C

Plenary 5: Next Generation PE_Innovative Methods for Assured and Secure Access toSpace Resources
Wednesday 27 September 2017, 08:30 – 09:30
Location: Adelaide Convention Center – Hall C

Plenary 6: MoonMars Villages for Science, Technology, Innovation, Cooperation, Security and Inspiration
Wednesday 27 September 2017, 13:30 – 14:30
Location: Adelaide Convention Center – Hall C

Plenary 7: From Up There to Down Here Big Space Data Driving Sustainable Development and Economic Growth on Earth
Thursday 28 September 2017, 08:30 – 09:30
Location: Adelaide Convention Center – Hall C

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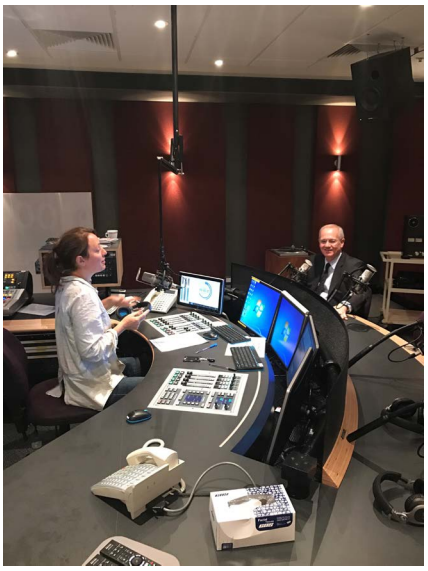
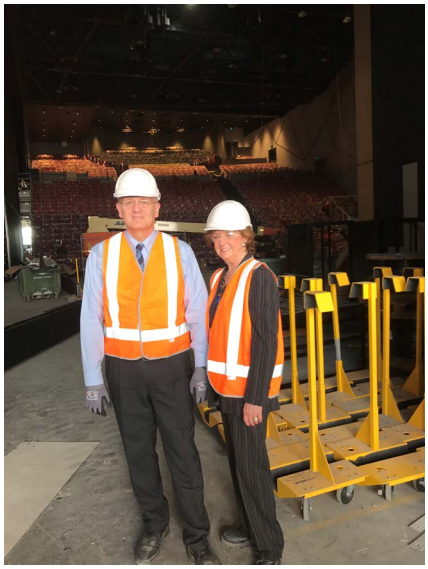
#IAC2017 Latest News

IAF President Dr. Jean-Yves Le Gall's visit to Adelaide

The IAF President Dr. Jean-Yves Le Gall visited Adelaide, South Australia last month, the host city for IAC2017. Dr. Le Gall delivered to the Space Industry Association of Australia a Distinguished Lecture on the topic of "Inventing the future of Space", which was attended by a large audience and was broadcasted online. To view the lecture go to http://www.spaceindustry.com.au/forums.php. Dr. Le Gall was also interviewed by the local and national media about the September IAC and the potential for the growth of the Australian space industry. The Australian IAC2017 Local Organizing Committee (LOC) held a meeting during his visit and he took the time to inspect the new East Wing of the Adelaide Convention Centre as it nears completion for International Astronautical Congress (IAC) in September. Dr. Le Gall was certainly impressed by the scale of the Plenary Hall (it will seat 3200 people) and the exciting plans for the IAC Opening Ceremony on Monday 25 September. The IAF Vice President for Global Membership and Diveristy Initiatives, Mrs. Mary Snitch, Senior Manager at Lockheed Martin, was also in Adelaide for the LOC meeting.



Dr. Le Gall in the ABC sound studio with morning show host Ali Clarke.



IAF President, Dr. Le Gall and IAF Vice President for Global Membership Development and Diversity Initiatives, Mary Snitch visiting the East Wing (Plenary Hall) of the Adelaide Convention Centre as it nears completion for the IAC2017.

The new East Wing

Team India sorts out legal dispute on the Moon – 21 April 2017

The Research Unit on Military Law and Ethics (RUMLAE) and Adelaide Law School hosted the 2017 Asia-Pacific Regional Final of the prestigious Manfred Lachs Space Law Moot between the 18-21 April. The Manfred Lachs Space Law Moot is an annual global competition, in its 25th year, organised by the International Institute of Space Law. The World Finals held during the International Astronautical Congress, this September in Adelaide.

The competition was held on the University of Adelaide campus and included participants from Iran, India, China, Singapore, Indonesia, South Korea, Hong Kong and Australia.

37 teams participated in mock International Court of Justice proceedings to argue principles of space and international law with respect to a fictitious dispute relating to activities on the moon in 2027.

The winning team was National Law School, India University Bangalore, with the team from City University of Hong Kong close runners up.

The World Finals will be judged in Adelaide by three members of the International Court of Justice from the Hague, in September.

Professor Steven Freeland, Professor Melissa de Zwart, Sharan Bhavnani, Hrishika Jain, Karan Dhalla, Professor Ivan Shearer and Professor Dale Stephens.

Three Australian cube sats launched

Australian start-ups planning to operate in the global small satellite market received a major lift on 19 April when the first Australian-built satellites in 15 years were launched by NASA. The three cube satellites are now at the International Space Station. In May, the cubesats will be launched to around 380km into the thermosphere where they will take extensive measurements on weather and communications systems while drifting into an orbit around Earth.

The program is a combined Australian university effort by the University of New South Wales, University of Sydney, Australian National University, the University of Adelaide and the University of South Australia. It is part of the international space mission, called QB50, with universities from 22 countries involved.

“The launch is significant boost for the space sector in Australia” said Michael Davis, Chair of Australia’s Space Industry Association. “It demonstrates that we have the talent and the expertise to build and launch our own commercial orbiting systems. Australia is back in space!”

Note : The Space Industry Association of Australia (host of the IAC2017) last month released a White Paper calling for an official space agency in Australia – see http://www.spaceindustry.com.au/prezi.php

Call for Delegate Nominations for the 2017 IPMC Young Professionals Workshop

2017 IPMC Young Professionals Workshop at the 68th IAC in Adelaide, Australia Sunday September 24th, 2017

Goal: The International Project/Programme Management Committee (IPMC) Young Professionals Workshop seeks to gather input from young professionals in the international space community to gain the knowledge they need to better develop and empower the next-generation workforce.

We would like your organisation to nominate delegates for this workshop and represent your views in this international forum. Names and contact details for your nominations are to be sent before Wednesday **May 31st 2017**, to the Workshop Organising Committee at yp_workshop@iafastro.org.

The delegates for this workshop are asked to be physically present at the day of the workshop as well as the International Astronautical Congress and would fit the profile of a young professional. Young professionals are typically defined as being age 35 and under and having at least one to two years of experience on a project team and/or in the aerospace industry. A diversity of backgrounds (e.g., engineering, management, science, etc.) is encouraged in order to produce thoughtful and well-rounded observations and recommendations that will be presented to the IPMC.

The delegates will be working in teams on the workshop topics via skype, email, webex, etc. prior to the workshop with kickoff planned end of June. To each workshop topic, a mentor will be assigned to help the workgroups advance in their research.

The **topics** for the workshop have been defined by the Workshop Organising Committee and IPMC:

- Topic 1; Building the case for On the Side Projects
- Topic 2; Learning partnership between YPs and senior and/or retired aerospace professionals
- Topic 3; Reshaping the space industry into Space 4.0 – YP Recommendations

The YP Workshop organisation does not provide grants for delegates to attend the workshop. Delegates are responsible for their own funding; nominating organisations are encouraged to financially aid their delegates.

Additional information on the IAF and the IPMC can be found at http://www.iafastro.org/ as well as http://www.iac2017.org/. Questions on the Workshop can be addressed to ipmc.yp.workshop@gmail.com

2017 IAF World Space Award recipient - Maj. Gen. Charles Frank Bolden, Jr.

Maj. Gen. Charles Frank Bolden, Jr., (USMC-Ret.) was nominated by President Barack Obama and confirmed by the U.S. Senate as the 12th Administrator of the National Aeronautics and Space Administration. He began his duties as head of the agency on July 17, 2009. As Administrator, Bolden leads a nationwide NASA team to advance the missions and goals of the U.S. space program.

At NASA, Bolden has overseen the safe transition from 30 years of space shuttle missions to a new era of exploration focused on full utilization of the International Space Station and space and aeronautics technology development. He has led the agency in developing a Space Launch System rocket and Orion spacecraft that will carry astronauts to deep space destinations, such as an asteroid and Mars. He also established a new Space Technology Mission Directorate to develop cutting-edge technologies for the missions of tomorrow. During Bolden's tenure, the agency's support of commercial space transportation systems for reaching low-Earth orbit have enabled successful commercial cargo resupply of the space station and significant progress toward returning the capability for American companies to launch astronauts from American soil by 2017. Bolden has also supported NASA's contributions toward development of developing cleaner, faster, and quieter airplanes. The agency's dynamic science activities under Bolden include an unprecedented landing on Mars with the Curiosity rover, launch of a spacecraft to Jupiter, enhancing the nation's fleet of Earth-observing satellites, and continued progress toward the 2018 launch of the James Webb Space Telescope, the successor to the Hubble Space Telescope.

Bolden's 34-year career with the Marine Corps also included 14 years as a member of NASA's Astronaut Office. After joining the office in 1980, he traveled to orbit four times aboard the space shuttle between 1986 and 1994, commanding two of the missions and piloting two others. His flights included deployment of the Hubble Space Telescope and the first joint U.S.-Russian shuttle mission, which featured a cosmonaut as a member of his crew.

Prior to his nomination as NASA administrator, Bolden was Chief Executive Officer of JACKandPANTHER LLC, a small business enterprise providing leadership, military, and aerospace consulting, as well as motivational speaking.

Born Aug. 19, 1946, in Columbia, S.C., Bolden graduated from C. A. Johnson High School in 1964 and received an appointment to the U.S. Naval Academy. He earned a Bachelor of Science degree in electrical science in 1968 and was commissioned as a second lieutenant in the Marine Corps. After completing flight training in 1970, he became a Naval Aviator. Bolden flew more than 100 combat missions in North and South Vietnam, Laos, and Cambodia, while stationed in Namphong, Thailand between 1972 - 1973.

Bolden earned a Master of Science degree in systems management from the University of Southern California in 1977. In 1978, he was assigned to the Naval Test Pilot School at Patuxent River, Md., and completed his training in 1979. While working at the Naval Air Test Center's Systems Engineering and Strike Aircraft Test Directorates, he tested a variety of ground attack aircraft until his selection as an astronaut candidate in 1980.

Bolden's NASA astronaut career included technical assignments as the Astronaut Office Safety Officer; Technical Assistant to the Director of Flight Crew Operations; Special Assistant to the Director of the Johnson Space Center in Houston; Chief of the Safety

Division at Johnson (where he oversaw efforts to return the shuttle to flight safely after the 1986 Challenger accident); lead astronaut for vehicle test and checkout at the Kennedy Space Center in Florida; and Assistant Deputy Administrator at NASA Headquarters. After his final shuttle flight in 1994, he left NASA and returned to active duty with Marine Corps operating forces as the Deputy Commandant of Midshipmen at the U.S. Naval Academy.

In 1997, Bolden was assigned as the Deputy Commanding General of the 1st Marine Expeditionary Force in the Pacific. During the first half of 1998, he served as Commanding General of the 1st Marine Expeditionary Force Forward in support of Operation Desert Thunder in Kuwait. He was promoted to his final rank of major general in July 1998 and named Deputy Commander of U.S. forces in Japan. He later served as the Commanding General of the 3rd Marine Aircraft Wing at Marine Corps Air Station Miramar in San Diego, Calif., from 2000 - 2002. He retired from the Marine Corps in 2003. Bolden's many military decorations include the Defense Superior Service Medal and the Distinguished Flying Cross. He was inducted into the U.S. Astronaut Hall of Fame in May 2006.

Bolden is married to the former Alexis (Jackie) Walker of Columbia, S.C. The couple has two children -- Anthony Chè, a colonel in the Marine Corps, who is married to the former Penelope McDougal of Sydney, Australia, and Kelly Michelle, a plastic surgeon at the Howard University Hospital in Washington.

2017 IAF Allan D. Emil Memorial Award recipient - Dr. LEI Fanpei

Dr. LEI Fanpei is the Chairman of China Aerospace Science and Technology Corporation (CASC), the President of of Executive Council of Chinese Society of Astronautics (CSA), Co-Chairs of 2017 Global Space Exploration Conference (GLEX2017), Chairman of the Steering Committee of the IAA Studies Center (China), Commander-in-Chief of China's New-Generation Launch Vehicle Program, Deputy Commander-in-Chief of China's Manned Space Program, Deputy Commander-in-Chief of China's Lunar Exploration Program, Deputy Commander-in-Chief of China's First Mars Exploration Mission, Commander-in-Chief of China's Hard X Ray Telescope Satellite Program.

Dr. LEI Fanpei has made excellent accomplishments in the fields of international cooperation, space engineering management and academic research.

Accomplishments of International Cooperation

Dr. LEI Fanpei attaches great importance to international cooperation and vigorously promotes the international development of China's space industry. With his great efforts, CASC has established extensive relations with a large number of space enterprises, governmental agencies, academic institutions and international organizations, and has built strategic partnership of mutual benefit with many of them. Under his leadership, CASC positively integrates itself into the international commercial space activities and provides in-orbit satellite delivery and commercial launch services for the international users; helps the developing countries realize sustainable development by using of space technology; substantially participates in and supports the activities of the international space organizations by fully making use of their roles and strengthening international exchanges and cooperation, thus promoting the progress of space technology and its applications and bring benefits to more people.

Under his leadership, CASC has successfully implemented many international cooperation programs, such as the China-Brazil Earth Resources Satellite Program, Sino-French Ocean Satellite Program, China-Italy Electromagnetic Satellite Program for the purpose of peaceful utilization and exploration of the outer space resources. CASC also actively participates in the intergovernmental multilateral cooperation,such as activities of UNCOPUOS, BRICs remote sensing satellite constellation program, the International Charter on Space and Major Disasters (CHARTER) and Inter-Agency Space Debris Coordination Committee (IADC).

Up to now, CASC has completed 54 commercial launch services for customers in more than 20 countries and regions, exported 11 satellites to and provided 12 Piggyback launch services for 9 countries.

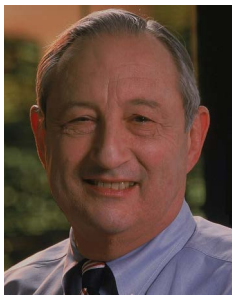
Under Dr. LEI' Fanpei's leadership, CASC has always paid attention to the cooperation with developing countries by maintaining friendly relations and cooperation with space agencies of Brazil, Pakistan, Nigeria, Bolivia, Venezuela and Laos. CASC has actively carried out technical transfer, joint development, personnel training and formulation of strategic planning of space development. CASC has trained more 600 space professionals for over 30 countries and helped partners to set up their own space system. The China-Brazil CBERS program is known as the "South and South Cooperation Model" which not only supports the the economic construction and social development of the two countries, but also realizes the free data delivery to the regions of South Africa and Southeast Asia.

2017 IAF Frank J. Malina Astronautics Medal recipient - Lynn Cominsky

Lynn Cominsky is the Chair of the Physics and Astronomy Department at Sonoma State University (SSU) and the founder and director of SSU's Education and Public Outreach Group. She is an author on over 150 research papers in refereed journals, and the Principal Investigator on over $22 million of grants to SSU. Funded by NASA, NSF and the US Department of Education, Cominsky and her group excel at the development of interactive web-based and hands-on STEM activities for students in grades 5-14. Current projects include the 'Learning by Making' STEM curriculum being piloted by six rural, high-needs high schools in Mendocino County, 'Rising Data: A Flight Project Curriculum for Community College Students" in which students are using rockets and drones to take scientific data with custom-built payloads, and "EdgeCube: A 1U Global Climate Monitor" which is the second

CubeSat to be built by SSU students. In the past, she has served as the scientific director for the PBS NOVA television program "Monster of the Milky Way" and accompanying planetarium show "Black Holes: The Other Side of Infinity." In 1993, Prof. Cominsky was named SSU's Outstanding Professor, and the California Professor of the Year by the Council for the Advancement and Support of Education. In 2007, she was named a Fellow of the California Council on Science and Technology, in 2009, a Fellow of the American Physical Society and in 2013, a Fellow of the American Association for the Advancement of Science. Other recent awards include the 2014 Aerospace Awareness award from the Women in Aerospace organization, the 2015 Sally Ride Education Award from the American Astronautical Society, the 2016 Education Prize from the American Astronomical Society and the 2016 Wang Family Excellence Award from the California State University.

IAF Hall of Fame



Robert D. Briskman

Mr. Briskman received his Bachelor of Science degree from Princeton University and a Master of Science in Electrical Engineering from the University of Maryland. He has been involved with the implementation of satellite communications systems since their inception. Mr. Briskman is currently President of Telecommunications Engineering Consultants. Previously, he co-founded Sirius Satellite Radio in 1991 serving as Executive Vice President, Engineering, where he was responsible for the implementation of its satellite radio broadcasting system to mobile subscribers in the United States, and then served as Technical Executive of Sirius XM Radio.

Mr. Briskman was employed by the Geostar Corporation from 1986 to 1990 where he was Senior Vice President, Engineering. Mr. Briskman was with COMSAT from 1964 through 1985 where he last was responsible for providing technical services in the areas of satellites, earth stations and telecommunications systems. He was Vice President, System Implementation of COMSAT General Corporation. Prior to joining COMSAT, Mr. Briskman was Chief of Program Support for the Office of Tracking and Data Acquisition at NASA and received the APOLLO Achievement Award from NASA. He worked for the Army Security Agency and IBM before NASA.

Mr. Briskman is a Fellow and past Director, Vice President for Technical Activities and Secretary-Treasurer of the IEEE, which gave him the 2008 IEEE AESS Pioneer Award, a Fellow of the AIAA, which gave him the 2007 Aerospace Communications Award and a Member of the National Academy of Engineering. He has authored over seventy technical papers, holds many United States and foreign patents and has been inducted into the SSPI, the CEA Consumer Electronics, and the Space Foundation Halls of Fame and the University of Maryland Innovation Hall of Fame. Mr. Briskman was a former President of the North American Broadcasters Association's Board of Directors.

Berndt Feuerbacher

Berndt Feuerbacher was born in 1940 in Dresden, Germany. He completed his academic education at the Ludwig Maximilian University of Munich. He was appointed at the European Space Agency in the Space Science Department at ESTEC in Noordwijk, Netherlands.

His past activities include: Principal Investigator for laboratory experiments on lunar surface materials from the Apollo flights; project scientist for various science missions, including the International Ultraviolet Explorer satellite and the First Spacelab Payload.

In 1981 he was appointed Chair of Space Physics at the University of Bochum in Germany, and simultaneously Director of the Institute of Space Simulation at the German Aerospace Center (DLR) in Cologne.

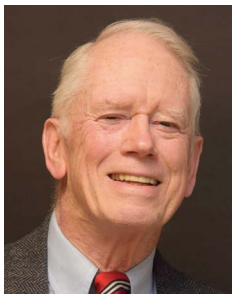
After German reunification in 1990, he supported the integration of the former Institute of Cosmic Research of the Academy of Science of the German Democratic Republic, founding two new DLR Institutes in Adlershof, Berlin.

His main research activities concentrated on materials science and solid state physics using microgravity conditions. He contributed to progress in the understanding of the interaction of dust and grain particles with neutral and plasma environments in space and on Earth, and was active in research on comets and small bodies in planetary systems.

In this context he was involved in numerous space missions like TEXUS, Spacelab1, D1, D2, Eureca, Mir and MSL as well as in instrumental developments and ground operation systems. He initiated the design and construction of a landing probe called “Philae” for the ESA Rosetta mission, which has landed on comet Churyumov-Gerasimenko in 2014.

His scientific results have been published in more than 180 journal papers, 12 books, and led to eight patents. After his retirement in 2006, Berndt Feuerbacher was appointed founding director of the new DLR Institute of Space Systems in Bremen.
Berndt Feuerbacher advised ESA, NASA and the German space agency in various functions. He is active in learned societies such as the European Physical Society, DGLR, COSPAR, ELGRA, ESSC and others where he is a member, a board or council member. He was elected full member of the IAA in 1986.

He has been active in the IAF as committee member since 1982 and served as IPC Co-Chairman in 2001 (Toulouse), 2002 (Houston) and 2003 (Bremen). He was elected Vice-President of IAF in 2006 before taking up his post as President (2008-2012).



Richard L. “Dick” Kline

Dick Kline received his BSME from Yale University and MSME from Princeton University. He joined Grumman Aerospace in June 1956 in the Thermodynamics Department.

He was designated Apollo Lunar Module Thermal Shield Program Manager starting in 1966. He and his team developed a Thermophysics Laboratory where radiative properties of materials were determined under vacuum conditions. He then served as Grumman Technical Manager for the Lunar Module LTA-8 Manned System Test Program, managing all technical elements of this full-scale test campaign conducted at the NASA Manned Spacecraft Center at Houston, Texas. Two astronauts operated the Lunar Module in the 26 ft. vacuum chamber facility. The test objectives validated the flight profiles showing that the LM would perform properly in orbit. He received the NASA Astronaut’s Silver Snoopy Award “for Professional Excellence as Technical Director”.

He was later appointed Program Vice President, Grumman Space Division, with responsibility for civilian programs. He led cutting-edge technology developments encompassing, satellite servicing, EVA, telepresence and payload handling topics. He proposed that Grumman bid for NASA’s Space Station Program Support contract. This was a win and he helped establish a new Grumman division.

He served as Vice President and Deputy Director of the new Grumman Space Station Program Support Division, headquartered in Reston, Virginia, with operations at five NASA Centers (790 employees). He championed a short module concept, Integrated Truss concept and restructuring to reduce program costs by $6B. These proposals were baselined. His team received NASA Headquarter’s Special Service Group Award “for Contribution to the Restructuring Design of Space Station Freedom”.

After joining NASA In 1992 he directed a National Facilities Study to formulate a coordinated National Plan for World-class aeronautics and space facilities. It included review of over 1800 NASA, DoD, & DOE facilities. An unclassified facility inventory was placed on the Web for public use. All of his team’s 91 recommendations were accepted or accepted with modification. He was commended by U.S. Vice President Al Gore as part of reinventing government and received NASA’s Exceptional Achievement Medal for leadership.

He has been an active IAF participant since 1977, contributing as Co-Chair of the World Space Congress Technical Program Committee; Chairman, Congress Committee; and Co-Chair, International Program Committees over more than nine years.

He was appointed Affiliate Professor at George Mason University (GMU), and served for eighteen years on GMU’s School of Computational Sciences and Informatics Advisory Board, including four years as Chair.

He received the IAF Alan D. Emil Award, IAA Space Sciences Award, AAS Lovelace Award “for outstanding contributions to Space

Science & Technology", AIAA Medal for International Cooperation and their von Braun Space Management Medal. He received the "Yale Science & Engineering Award for Distinguished Service to Industry, Commerce or Education".

Dick is a past IAA Trustee and Scientific Activities Committee Vice-Chair. He was elected Fellow, and Director of the AIAA; and Fellow and Director of the American Astronautical Society.

Stanislav Konyukhov

Born: 1937-06-12. Died: 2011-04-03.

An outstanding scientist and designer in the field of space rocket engineering. A General Designer – General Director of Yuzhnoye SDO in 1991-2010. Doctor of Engineering (1987), Professor (1991), Academician of National Academy of Sciences of Ukraine (1992), Academician of International Engineering Academy (1992), Academician of K.E. Tsiolkovsky Academy of Cosmonautics (1994), Academician of New York Academy of Sciences (1996), Academician of International Academy of Astronautics (1997), Academician of Academy of Military Sciences of Russian Federation (2004), Vice President of International Academy of Astronautics (2005).

Stanislav Konyukhov was born in the village of Bekrenevo, Vologda region, Russia. After he had graduated from Physical Engineering Department of Dniepropetrovsk State University (1959), he worked at Yuzhnoye SDO as engineer, senior engineer (1959-1962), leading engineer, leading design engineer (1962-1964), chief of section (1964-1974), chief of department, deputy chief design engineer (1974-1978), complex supervisor, deputy chief of complex (1978-1984), Director and Chief Design Engineer of the Space Vehicles Design Office (1984-1986), First Deputy General Design Engineer of the Yuzhnoye NVO, First Deputy Director of the Yuzhnoye SDO (1986-1991), General Designer – General Director of Yuzhnoye SDO (1991-2010).

S. Konyukhov is one of the talented followers of M.K. Yangel and V.F. Utkin who passed a great school of developing, designing, development and flight testing of missile and space rocket systems. He made significant contribution in the development and building of several generations of strategic missile systems, launch vehicles and spacecraft created in Yuzhnoye SDO, including one of the most powerful and effective liquid-propellant strategic missiles R36M (SS-18), solid-propellant missile RT23 (SS-24) of silo and railroad basing mode. He justified and developed the principles of developing, designing and development testing of pop-up launch scheme for liquid-propellant heavy missiles, which considerably improved the performance of missile systems put in Strategic Missile Forces service. He supervised the works on designer's supervision and considerable prolongation of guaranteed service life of R36M (SS-18) missile being in the Russian Army inventory.

Substantially, due to S. Konyukhov's initiative and energy, Yuzhnoye SDO entered the world space services market and occupied a deserved place there. He supervised the works on creation of unique Sea Launch and Land Launch space rocket systems with Zenit launch vehicles, Dnepr space launcher derived from decommissioned SS-18 missile, light-class Vega space launcher, on creation and commercial use of Cyclone-4 space launch system, and AUOS-CM-KI, Sich-1, Ocean, Sich-2 spacecraft et al.

S. Konyukhov holds an outstanding position among the pioneers - organizers of extensive international cooperation in space exploration. Owing to the international activities of Yuzhnoye SDO, Yuzhmash, Ukraine is included in the ten world ' s leading space powers and participates in the implementation of major international space projects like Sea Launch, Land Launch, Dnepr, Cyclone-4, Egyptsat, Vega et al.

Stanislav Nikolayevich Konyukhov gave much consideration to training of engineering and scientific manpower. He held a Chair of System Design at the Institute of Professional Development of the USSR Ministry of General Machine - Building (1987-1992), Chair of Flying Vehicles Designing at Kharkov Aviation Institute (1995). A Chief Editor of industry scientific - technical collection (1991), a member of Specialized Board of Dniepropetrovsk National University for dissertations defense (1988), a member of Experts Board of Supreme Certification Commission of Ukraine (1992), a member of Section of Interindustry Scientific-Technical Council for Space Research of Russian Academy of Sciences.

2017 IAF Young Space Leaders Recognition Programme (YSL) winners

The YSL Recognition Programme is targeted at exceptional students and young professionals (age 21-35) who demonstrate leadership in their academic or early careers. The YSL winners are presented with their award during the Closing Ceremony of the annual International Astronautical Congress (IAC). Awardees also attend the IAC Gala Dinner as guests of the IAF President and enjoy free IAC registration. Congratulations to the 2017 winners:

Laszlo Bacsardi
University of Sopron

Minoo Rathnasabapathy
Space Generation Advisory Council (SGAC)

Patrick Hambloch
University of Alabama in Huntsville

Timiebi Aganaba-Jeanty
Centre for International Governance Innovation (CIGI)

Stephanie Wan
Space Generation Advisory Council (SGAC)

2017 IAF Emerging Space Leaders (ESL) Grant winners

Fourteen young people have been selected to participate in the 2017 IAF ESL Programme, and attend the 68th International Astronautical Congress in Adelaide, Australia from 25 – 29 September 2017. These participants will receive the following:

- Round trip air fare between the candidate's home country and Adelaide, Australia.
- Funding for transportation, lodging and meals during the candidate's stay in Adelaide, Australia.
- Free registration for the 68th International Astronautical Congress as well as the Space Generation Congress or the 2017 UN/IAF Workshop, the Cross Cultural Presentation Workshop and other associated activities.
- Mentors will provide advice on presentations at the IAC and on activities before and during the IAC to help grant recipients benefit fully from the Congress and related meetings and meet with the grant recipient during the IAC.

Alexander Linossier
Australia
Technische Universität Berlin

Ani Vermeulen
South Africa
University of Cape Town's SpaceLab Programme

Narayan Prasad Nagendra
India
Satsearch.co

Louis Wei-yu Feng
Taiwan
University of Cape Town

Maria Alexandra Lora Veizaga
Bolivia
Bolivian Space Agency (ABE)

Pablo Melendres Claros
Bolivia
Bolivian Space Agency (ABE)

Lisa Peacocke
New Zealand
Imperial College London

Merve Erdem
Turkey
International Law Department of Ankara University Faculty of Law

Doris Grosse
Germany
Australian National University (ANU) Research School of Astronomy and Astrophysics

Ahmad Shaqeer Bin Mohamed Thaheer
Malaysia
Universiti Sains Malaysia

Abinish Kumar Dutta
Nepal
Kathmandu University

Sarah Wittig
Australia
European Space Agency (ESA)

Matjaz Vidmar
Slovenia
University of Edinburgh

Marco Gomez Jenkins
Costa Rica
Costa Rica Institute of Technology

webs edge™
CAPTURING ISSUES + AUDIENCES

As an additional service to IAF Members, the International Astronautical Federation (IAF) is partnering with the international film and broadcasting company, WebsEdge, to bring IAC TV to this year's International Astronautical Congress in Adelaide, Australia. IAC TV is an on-site conference television channel featuring a new episode daily, filmed and screened around the Convention Center, as well as on a dedicated television channel in selected guest hotel rooms and online. The TV segments will profile prominent space educators and scientists, highlight the hard work of societies, companies, associations, agencies, museums, universities, institutes and organizations committed to elevating the quality of space in the world, and provide an opportunity to learn about new strategies and techniques, and innovative programmes and initiatives that are helping to unlocking imagination, fostering innovation and strengthening security. IAC TV provides unique opportunities for IAC delegates to give onsite interviews on topics of their concerns and their impressions from the congress.

For more information please contact: silvia.antolino@iafastro.org

Hungarian Space Forum 2017

Hungarian Astronautical Society

The Hungarian Astronautical Society (MANT), a civil association representing Hungary in IAF, organized the Hungarian Space Forum 2017 conference in Sopron between 5-7 April, in collaboration with the Geodetic and Geophysical Institute (Research Centre for Astronomy and Earth Sciences, Hungarian Academy of Sciences). This biennial meeting is the largest national event for Hungarian space research experts, with a long tradition dating back to the early 1970's. The wide range of topics in oral an poster presentations covered e.g. space physics, space weather, geophysics, space astronomy, remote sensing, satellite positioning, space communications, education, big data, and experiments on board the International Space Station and sounding rockets. Apart from providing a forum for the latest scientific and engineering results, the conference with its informal atmosphere serves as a unique platform for networking and facilitates collaboration in the Hungarian space sector.

An Expert Meeting on the Open Universe Initiative and the second edition of ISF 2017 at regional level in Nairobi (Kenya)

agenzia spaziale italiana

On 11-12 April 2017, ASI hosted in Rome an Expert Meeting in preparation of the United Nations/Italy Workshop on the Open Universe Initiative, that will take place at the UN Headquarters in Vienna, from 20 to 22 November 2017. The Expert Meeting was organized by the United Nations Office of Outer Space Affairs (UNOOSA) in cooperation with ASI. It represented the first step in the definition of the objectives and roadmap of the Open Universe Initiative, which was proposed by Italy at the 2016 session of the COPUOS, under the impulse of ASI, with the aim of promoting open access to and use of space science data, as drivers for knowledge and development. ASI has been working towards this objective since the launch of its ASI Science Data Center (ASDC) in 2000, which provides also satellite services based on open data policies. The event gathered 54 experts and professionals from all over the world, who emphasized the importance of promoting the best practices and standards developed by the scientific community over the past decades, expressed their interest in advancing towards a more open and transparent sharing of scientific data, and highlighted the value of education in science as a prerequisite for the Initiative. The Open Universe Initiative is an integral part of the preparation of UNISPACE+50 and contributes to the achievement of the Sustainable Development Goals.

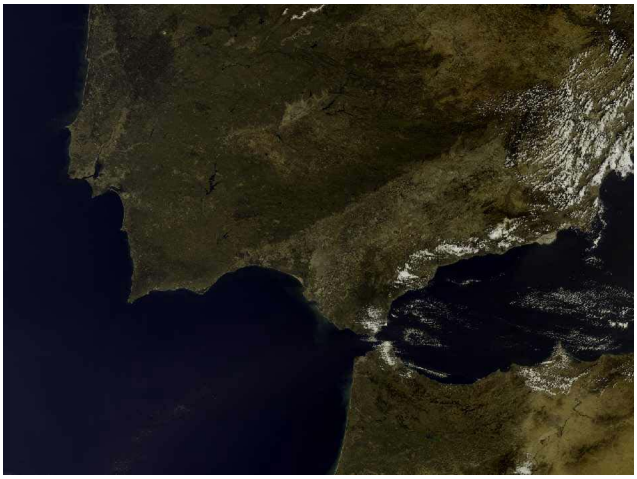
ASI is also working with IAF on the organization of the second edition of the International Space Forum (ISF), held last year in Trento (Italy) and devoted to a greater involvement of national universities and academies in space programs and activities. This second edition will be focused on African needs and will be hosted by Kenya, in Nairobi, in the last week of November 2017. As stated in the Trento Space Statement, the aim of the ISF is, in fact, the involvement of local Universities in the conception, design and exploitation of Space missions and programs, sustaining space capacity building curricula and research activities and to strengthen responses to global challenges.

Indian Ocean Colour Symposium advances new capabilities flowing from the Copernicus marine data stream

EUMETSAT

The third international ocean colour science meeting (IOCS) convened by the International Ocean Colour Coordinating Group (IOCCG) in partnership with EUMETSAT, the European Space Agency (ESA) and the European Commission took place from 15 – 18 May in Lisbon, Portugal.

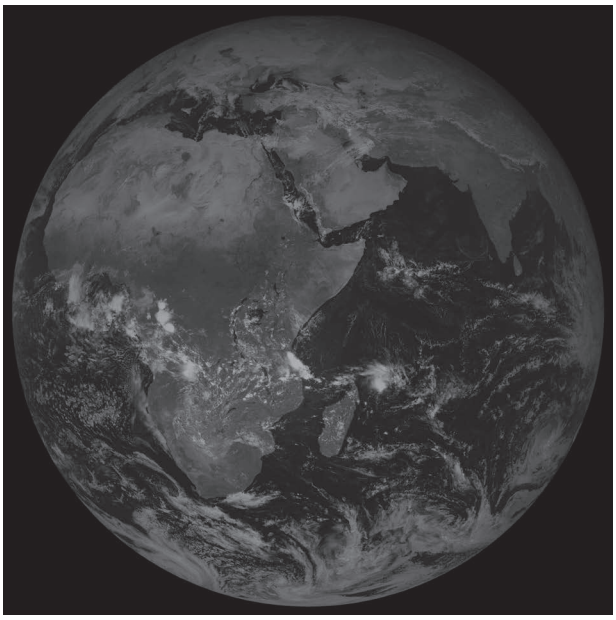
This was the first IOCS meeting after the launch of the Copernicus Sentinel-3A and -2A satellites respectively operated by EUMETSAT and ESA on behalf of the European Union in support to Copernicus, the European Earth Observation programme. Discussions focussed on emerging applications and first scientific results of ocean colour observations which form part of the new marine data stream.



In particular the Ocean and Land Colour Instrument (OLCI) on board the Sentinel-3A satellite allows for tailored applications. Phenomena like harmful algae blooms and changes in marine ecosystems can now be monitored on an operational basis and on a global scale from space, creating new opportunities for the management of marine resources, fisheries and for understanding and quantifying the role of the ocean in the carbon cycle in our changing climate.

All Sentinel-3 data are available openly and free of charge through EUMETSAT's Copernicus Online Data Access system (CODA) and they are also being distributed through the EUMETCast multicasting system.

In the future, upon request of the EC, EUMETSAT will implement, together with MERCATOR Ocean and ECMWF, a Copernicus Data and Information Access System (DIAS), using innovative Big Data IT concepts – such as cloud computing, hosted processing, to facilitate further the access, among others, to Copernicus data and products.



2017 EUMETSAT Meteorological Satellite Conference to take place in Rome, Italy, from 2 – 6 October

The EUMETSAT Meteorological Satellite Conference is a forum that brings together meteorologists, scientists and researchers from around the world to share their experience and knowledge during plenary, poster and workshop sessions.

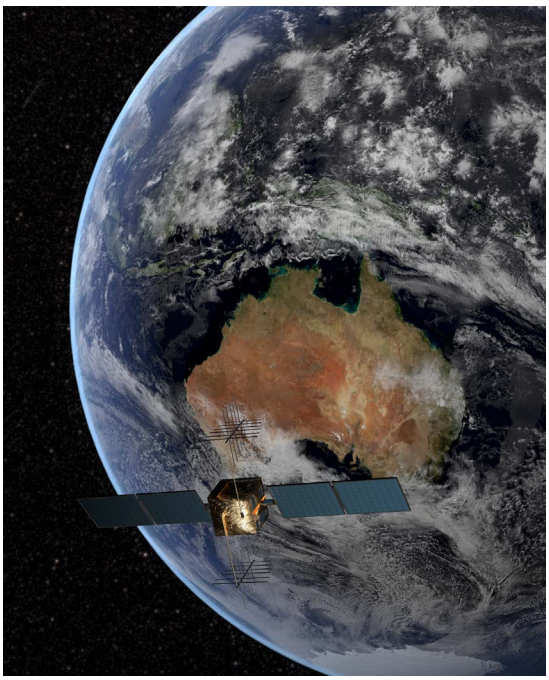
EUMETSAT will be joined in the organisation and hosting of the event by the Italian Air Force-Meteorological Service (ITAF-MET), the national provider for weather and climate services in Italy.

For more details and 2nd announcement check http://www.eumetsat.int/website/home/News/ConferencesandEvents/DAT_3212307.html

Meteosat-7 decommissioned after almost 20 years of service

On 11 April, at 9:00 UTC the first generation Meteosat-7 spacecraft was finally switched off, ending the exceptional service record not only of one satellite but of the whole Meteosat first generation mission started by ESA in 1977. Since 1 February 2017 EUMETSAT contributes to the Indian Ocean mission with the second generation Meteosat-8

New research to improve positioning technology in Australia and New Zealand



A multi-million dollar, collaborative research project is set to deliver more accurate positioning services in Australia and New Zealand, trialling innovative technology that is already in use in the United States and Europe.

Using a satellite-based augmentation system, the Australia and New Zealand Cooperative Research Centre for Spatial Information will lead the $12 million research initiative in partnership with researchers, government and industry.

The research will trial two new satellite positioning technologies, namely the Next Generation Space Based Augmentation System (SBAS) and transmitting Precise Point Positioning (PPP) signals in more than ten industries, over two years. SBAS satellite technology improves the accuracy of GPS signals from around five metres to less than ten centimetres, in a cost effective way. By 2030, the adoption of improved, highly accurate, real-time satellite positioning capabilities in Australia and New Zealand has the potential to generate $73 billion in value for Australia alone.

Many consumers and industries are set to benefit from this cutting-edge technology, so watch this space!

To learn more about this research and the technology involved, visit the Australian Government booth at this year's International Astronautical Congress in Adelaide.

New international space masters' programs in Bremen

With several universities and research institutes as well as industrial key players in the field of space science, technology, and engineering, the Free Hanseatic City of Bremen has become one of the main space locations in Europe.

In order to be internationally competitive science and industry are constantly demanding highly trained young professionals. Because of this challenge the University of Bremen decided to offer an even more specialized education for university students. Next winter semester (2017/2018) two new international masters' programs will be launched: "Space Sciences and Technologies" and "Space Engineering".

The interdisciplinary study program "Space Sciences and Technologies" focuses on Earth observation by means of satellite systems with three main elements: Gathering data (sensing), analysing data (processing) and the transmission of data back to Earth (communication). The "Master of Space Engineering" is an interdisciplinary study program teaching students how to design, build and test complete space systems like satellite launchers and payloads for space missions.

Astronautin

In 2016 HE Space launched the 'Astronautin' mission to send the first female German astronaut into space before 2020. After a successful crowdfunding campaign, which ran over two months, training is now underway for the down-selected candidates.

In April 2017, the two final astronaut candidates were announced: Nicola Baumann, Eurofighter pilot, and Insa Thiele-Eich, meteorologist. They made it through the year-long selection process, including interviews, medical tests and psychological examinations, and they convinced a committee of experts of their merits to pursue this ground-breaking opportunity. In July 2017 they will begin their astronaut training which includes fitness and scuba training, basics of space flight, communication and media training, parabolic flights and space station basics. We are looking for further sponsors to help realize this important mission. Updates on the Astronautin can be found here:

Facebook: https://www.facebook.com/DieAstronautin/
Website: http://dieastronautin.de/

Launch of the Australian Spatial Industry 2026Agenda Initiative

The Australian spatial sector launched its 2026 Spatial Industry Transformation and Growth Agenda (2026Agenda) Action Plan in April 2017. The 2026Agenda is a 10-year roadmap that summarises the key initiatives that will transform the current spatial sector in Australia, culminating with the integration of the space and spatial sectors in a fully integrated upstream and downstream national space capability. In his foreword, the Hon Angus Taylor MP, Australian Government Assistant Minister for Cities and Digital Transformation, challenges the industry "to take this 2026Agenda forward and become a leading example of innovation and leadership for the nation".

The Action Plan will be presented at the upcoming IAC2017 in Adelaide, and is accessible here: https://2026agenda.com/

This is a national whole-of-sector initiative that has been coordinated by a Working Group jointly chaired by representatives of the Spatial Business Association of Australia (SIBA) (industry's peak body) and the Australian Collaborative Research Centre for Spatial Information (CRCSI) (a leading national spatial research centre), and including representatives from leading government organisations, including:

- ANZLIC – the Spatial Information Council
- Australian Earth Observation Community Coordination Group (AEOCCG)
- Data61 (CSIRO)
- Landgate (Government of Western Australia)
- Geoscience Australia
- Queensland Department of Natural Resources
- Department of the Prime Minister and Cabinet (Australian Government)

If you want to know more about the 2026Agenda please talk to us at IAC2017 – you will find us at the Australian Government booth – or get in touch at info@2026agenda.com

Space Policy Institute

SPACE POLICY INSTITUTE
ELLIOTT SCHOOL OF INTERNATIONAL AFFAIRS

Celebrating the 30th year since its founding, the Space Policy Institute at George Washington University in Washington D.C. has maintained an active presence in the United States and international space communities. In support of research and education, SPI offered multiple space-related graduate courses in policy, law, national security and health, and continued its outreach through over a dozen sponsored and hosted events. Our students were provided travel support to attend conferences in cities such as Washington D.C., Montreal, Colorado Springs and Guadalajara. SPI also hosted several visiting scholars from organizations in Japan, Ukraine, France, Slovakia and South Korea, and supported two doctoral students obtaining PhDs in space-related research. SPI faculty members and students were published in dozens of journals and cited for expert commentary in over 100 media outlets. In addition to their studies, current students are involved in organizations such as The National Aeronautics and Space Administration, Defense Advanced Research Projects Agency, Secure World Foundation, Center for Strategic and International Studies, European Space Policy Institute and Bryce Space and Technology.

Interview with Naomi Mathers and Christiane Schmullius

Naomi Mathers
IPC Co-Chair

Advanced Instrumentation and Technology Centre (AITC), Australia)

Christiane Schmullius
IPC Co-Chair

Friedrich-Schiller-University (FSU), Germany

68TH IAC
ADELAIDE 2017

1. Why did you chose the theme 'Unlocking Imagination, Fostering Innovation and Strengthening Security'?

The congress theme was chosen to reflect the innovative nature of the space industry, the growth of space start-ups and the importance of developing the future workforce. The theme also highlights the importance of the industry to our future security. Space derived data and services are critical to our monitoring of the environment, agriculture, marine, aviation, logistics and much more. Our aim is to promote the economic and social impact of the space industry and highlight Australia's capability in these areas, including our contribution to preserving the space environment through improved space debris tracking.

2. What kind of researches will be presented at the IAC 2017?

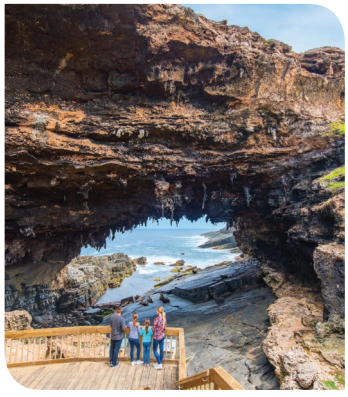
We have a very strong and very broad technical program for IAC 2017. This year more than 3400 abstracts were submitted, the third highest in the history of the IAC, with 230 abstracts submitted by Australians. The final program will include presentations on the Australian Government's review of the Australian space industry and the Space Activities Act, Earth Observation and the development of the Geoscience Australia DataCube, space debris tracking and mitigation technologies being developed at the Space Environment Research Centre, the instrumentation and test capability of the Advanced Instrumentation and Technology Centre, astronomy research and Australia's involvement in the Square Kilometre Array (SKA), Giant Magellan Telescope (GMT) and space-based astronomy, as well as our work in hypersonics, plasma physics, cubesats, and much more.

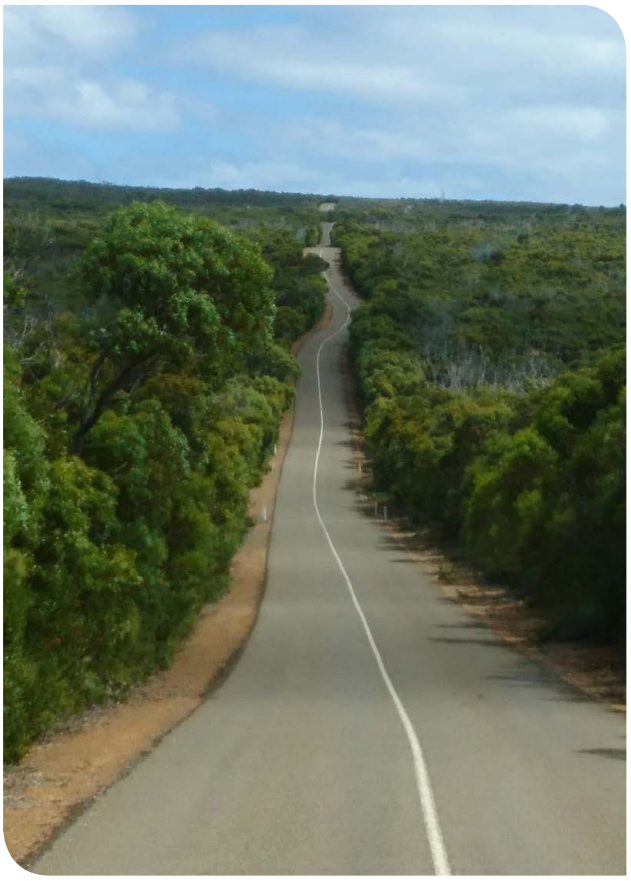
3. Do you have any advice to share with the Young Professionals, Emerging Space Leaders and Students attending the IAC 2017?

The IAC is a fantastic platform for young professionals and students to network with their peers and the global community. There are dedicated young professional and student programs. All require registration and some activities have a selection process, details can be found on the IAF website. The key for all delegates to get the most out of the congress is preparation. It is important to review the program well ahead of time. With up to 20 parallel technical sessions running at any time, the Global Networking Forum (GNF), the exhibition, B2B meetings and side events, pre-planning is key if you don't want to miss an event or key person.

4. What are your feelings as the IAC 2017 is approaching?

We are getting very excited as the IAC is approaching. I'm proud of what the Australian space industry and research community has to offer and I'm looking forward to showing it off. I think delegates will be pleasantly surprised when they find out just how much is happening Australia. We are also looking forward to taking a holiday when it's all over!





To Register for IAC 2017 click here!

#IAC2017

68th IAC

International Astronautical Congress

ADELAIDE, AUSTRALIA

25 - 29 SEPTEMBER 2017

The IAC is the one place and time of the year where all global space actors come together. The event attracts more than 3000 participants each year and offers a dense schedule filled with a variety of activities covering all space sectors and topics.

Register now at www.iac2017.org

Follow the conversation online #IAC2017

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The next newsletter will be issued in September 2017