



# Opportunities and Challenges for Legislators in Space Exploration and Space Traffic Management



**10<sup>th</sup> IAF International Meeting for Members of Parliaments**

**70<sup>th</sup> International Astronautical Congress – IAC 2019  
Walter E. Washington Convention Center**

*801 Mt Vernon PI NW, 20001 Washington, D.C., United States*





# Opportunities and Challenges for Legislators in Space Exploration and Space Traffic Management

## Welcome Message

Dear Members of Parliaments,

The International Astronautical Federation (IAF) is glad to welcome you all to the 10th IAF International Meeting for Members of Parliaments, organised on the occasion of the 70th International Astronautical Congress (IAC).

This year, we are particularly proud to celebrate a double anniversary. The IAC is now a longstanding tradition of the Space Community, and it has grown exponentially since its first edition in 1951. Similarly, the IAF international Meeting for Members of Parliaments has consolidated its status as associated events, and it is not anymore limited to the Sunday meeting but its programme has expanded including the first two days of the Congress.

Every year, since the first gathering in Korea in 2009, we focused our efforts in providing the Members of Parliaments an occasion to experience first-hand what is happening in the Space sector, what are its latest innovations and achievements, and what are the challenges that we are now facing. Those intertwined aspects are shown by this year's theme for the Meeting: "Opportunities and Challenges for Legislators in Space Exploration and Space Traffic Management"; the inspiration that space can provide and the challenges that it forces us to face will be dealt with two sessions, one focusing on Space Exploration and the other on Space Traffic Management, and by several keynotes.

We understand and cherish the relevance of National Parliaments, and individual Parliamentarians, in the development of effective and successful space programmes and we hope to support your efforts by providing you a platform to meet not only with fellow Members of Parliaments from all over the world, but also with Heads of Agencies, Space Experts, and Officers from the main organisations that compose this inspiring sector. We hope, and believe, that by having the opportunity of meeting,

***Connecting @ll Space People***



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discussing, and asking questions, you will all be able to develop best practices and find answers and inspiration to bring back home with you.

We would also like to thank you all for having decided to join us once again in this special year, and we hope that you will appreciate, as much as we do, the hospitality of Washington D.C.

We would also like to thank Hon. Kendra Horn, Chairwoman of the U.S. House Subcommittee on Space and Aeronautics, for chairing this meeting. It is unquestionable how the U.S. Parliament understood the importance of Space for the benefit of the whole society, and we are sure the Hon. Horne will embody this tradition, bringing to you her expertise and passion.



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



***Jan Woerner***  
*Vice President for*  
*Agency, Parliamentary*  
*and Ministerial Relations,*  
International Astronautical  
Federation (IAF)  
France





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**Sunday 20 October**

**08:30 – 09:00 Welcome Coffee**

**09:00 – 10:00 Welcome Remarks**



***Kendra Horn***  
*Chairperson,*  
US House Science  
Subcommittee on Space and  
Aeronautics and Chair of the  
10<sup>th</sup> IAF MOP Event



***Klaus-Peter Willsch***  
*Member of the German*  
*Bundestag,*  
Chairman of Aviation Space  
Group,  
IAC 2018 Host Country  
Germany



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



***John S. Langford***  
*President,*  
American Institute of  
Aeronautics and  
Astronautics (AIAA)  
IAC 2019 Host Country  
United States



***Jan Woerner***  
*Vice President for Agency*  
*Parliamentarian and*  
*Ministerial Relations,*  
International Astronautical  
Federation (IAF)  
France



***Mohammed Al Ahabbi***  
*Director General,*  
UAE Space Agency (UAE SA)  
IAC 2020 Host Country  
United Arab Emirates

*Moderation of the event by*  
*Kendra Horn, Chairperson, US House Science Subcommittee on Space and Aeronautics*  
*and Isabelle Duvaux Béchon, Head of Member States Relations and Partnerships*  
*Office, European Space Agency*

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**10:00 – 10:15      Keynote 1**



***Sandra Magnus***

*Co-Chair,*

IAC2019 Local Organizing Committee

United States

Dr. Sandra H. “Sandy” Magnus, is the Deputy Director of Engineering in the Office of the Secretary of Defense Research and Engineering. Prior to joining the DoD she served as the Executive Director of the American Institute of Aeronautics and Astronautics (AIAA), the world’s largest technical society dedicated to the global aerospace profession.

Selected to the NASA Astronaut Corps in April, 1996, Dr. Magnus flew in space on the STS-112 shuttle mission in 2002, and on the final shuttle flight, STS-135, in 2011. In addition, she flew to the International Space Station on STS-126 in November 2008, served as flight engineer and science officer on Expedition 18, and returned home on STS-119 after four and a half months on board. Following her assignment on Station, she served at NASA Headquarters in the Exploration Systems Mission Directorate. Her last duty at NASA, after STS-135, was as the deputy chief of the Astronaut Office.

Before joining NASA, Dr. Magnus worked for McDonnell Douglas Aircraft Company from 1986 to 1991, as a stealth engineer. While at McDonnell Douglas, she worked on internal research and development and on the Navy’s A-12 Attack Aircraft program, studying the effectiveness of radar signature reduction techniques.

## 10:15 – 10:30 **Keynote 2**



### ***Hiroshi Yamakawa***

*President,*

Japan Aerospace Exploration Agency (JAXA)

Japan

Hiroshi Yamakawa was born in Geneva, Switzerland in 1965. He received master's degree of engineering in 1990 and earned Ph. D from the Department of Aeronautics, School of Engineering in 1993 both from the University of Tokyo.

He became a research associate and an associate professor at the Institute of Space and Astronautical Science in 1993-2003, and an associate professor at Japan Aerospace Exploration Agency (JAXA) in 2003-2006. He engaged in mission design of numerous Earth-orbiting scientific satellite projects as well as in lunar and interplanetary missions. He also engaged in the navigation, guidance, and control systems of the solid propellant rocket, M-V, and liquid propellant reusable sounding rocket, RVT. He was a study manager and a project manager of the Euro-Japan collaborative mission to Mercury "BepiColombo" from 2000 through 2006. He was a visiting scientist at NASA JPL in 1997-1998 and at ESA ESTEC in 2002.

He moved to Kyoto University in 2006 as a professor of the Research Institute of Sustainable Humanosphere, a professor of the Graduate School of Engineering (cooperating chair) and a deputy director of the Unit for Synergetic Studies of Space. His academic interest lay in orbital mechanics, trajectory optimization, space propulsion, and space situational awareness.

He was appointed as secretary general at the Secretariat of Strategic Headquarters for Space Policy, Cabinet Secretary, Government of Japan in 2010 through 2012. Then, he was assigned member of the Committee for National Space Policy, Cabinet Office from 2012 through 2018.

He was appointed as the President of JAXA in April 2018.

## 10:30 – 10:45    **Keynote 3**



### ***Jim Bridenstine***

*Administrator,*

National Aeronautics and Space Administration (NASA)  
United States

James Frederick “Jim” Bridenstine was nominated by President Donald Trump, confirmed by the U.S. Senate, and sworn in as NASA’s 13th administrator on April 23, 2018.

Bridenstine was elected in 2012 to represent Oklahoma’s First Congressional District in the U.S. House of Representatives, where he served on the Armed Services Committee and the Science, Space and Technology Committee.

Bridenstine’s career in federal service began in the U.S. Navy, flying the E-2C Hawkeye off the USS Abraham Lincoln aircraft carrier. It was there that he flew combat missions in Iraq and Afghanistan and accrued most of his 1,900 flight hours and 333 carrier-arrested landings. He later moved to the F-18 Hornet and flew at the Naval Strike and Air Warfare Center, the parent command to TOPGUN.

After transitioning from active duty to the U.S. Navy Reserve, Bridenstine returned to Tulsa, Oklahoma, to be the Executive Director of the Tulsa Air and Space Museum & Planetarium.

Bridenstine was promoted to the rank of Lieutenant Commander in 2012 while flying missions in Central and South America in support of America’s war on drugs. Most recently, he transitioned to the 137th Special Operations Wing of the Oklahoma Air National Guard.

Bridenstine completed a triple major at Rice University, and earned his MBA at Cornell University. He has three children with his wife, Michelle.

## 10:45 – 11:15    **Coffee Break**



## 11:15 – 12:00 **Interventions by Members of Parliaments and Discussion**

### 12:00 – 13:30 **Session 1: Space Exploration**

Space exploration has evolved from a domain of competition to a realm of international cooperation. With an increasing number of space actors and the rise of new technologies that allow us to acquire new knowledge in ways only imaginable 50 years ago, new challenges and opportunities are also emerging for legislators.

#### Moderation by:



**Jan Woerner**  
*Vice President for Agency,  
Parliamentarian and Ministerial Relations,  
International Astronautical Federation (IAF)  
France*

#### Roundtable Discussion:



**Mohammed Al Ahbabi**  
*Director General,  
UAE Space Agency (UAE SA)  
United Arab Emirates*



**Pascale Ehrenfreund**  
*Chair of the Executive Board,  
German Aerospace Centre (DLR)  
Germany*



***Sergey Krikalev***

*Executive Director for Human Spaceflight,  
State Space Corporation ROSCOSMOS  
Russian Federation*



***Clay Mowry***

*Vice President – Global Sales, Marketing & Customer Experience,  
Blue Origin  
United States*



***Masami Onoda***

*Director of Washington Office,  
Japanese Aerospace Exploration Agency (JAXA)  
United States*



***Christian Sallaberger***

*Chairman of the International Space Exploration  
Committee,  
International Astronautical Federation (IAF)  
France*

**13:30 – 13:40**

**Group Picture**

**13:40 – 14:45**

**Lunch Break**

Address by:



***Dominique Tilmans***

*Honorary Senator of Belgium and President,  
EURISY  
France*

## 14:45 – 15:00      **Keynote 4**



### ***Kevin O'Connell***

*Director,*  
Office of Space Commerce,  
U.S. Department of Commerce  
United States

Kevin M. O'Connell is the Director of the Office of Space Commerce at the U.S. Department of Commerce. Within this position, Mr. O'Connell leads an office with responsibility as a space industry advocate within the Executive Branch of the U.S. government. Mr. O'Connell brings over 35 years of experience in the U.S. government, in research organizations, and as an entrepreneur and business leader to this position.

Mr. O'Connell has researched and written extensively on the policy, security, and global market issues related to commercialization of remote sensing. Aside from numerous articles and op-eds, he was co-author of *Commercial Observation Satellites: at the Leading Edge of Global Transparency* (2000). He served as the Executive Secretary and Staff Director of the NIMA Commission (1999-2000). He was a member, and later Chair, of NOAA's federal advisory committee on remote sensing from 2002-2016.

Previously, Mr. O'Connell served as the CEO of Innovative Analytics and Training, a Washington, D.C. professional services firm focused on analysis and decision support for U.S. government and commercial clients. Among other issues, the firm focused on market trends and anticipatory/futures analysis for high-technology industries such as cyber, cloud computing, and geospatial technologies. During this time, he also served as a senior consultant to the Office of the Director of National Intelligence and as an independent advisor to the Director, National Geospatial Intelligence Agency.

Mr. O'Connell's background also includes extensive experience in national security and intelligence matters, including assignments in the Department of Defense, Department of State, National Security Council, and the Office of the Vice President. He spent a decade conducting and managing research in these areas at the RAND Corporation, including as the first director of RAND's Intelligence Policy Center.

Finally, Mr. O'Connell has taught a long-running course on comparative intelligence in Georgetown University's School of Foreign Service, Security Studies Program.



**15:00 – 15:15      Keynote 5**



***Simonetta Di Pippo***

*Director,*

United Nations Office for Outer Space Affairs (UNOOSA)

Austria

Simonetta Di Pippo is the Director of the United Nations Office for Outer Space Affairs. Her experience includes serving as Director of the Observation of the Universe at Agenzia Spaziale Italiana (ASI) (2002-2008) and Director of Human Spaceflight of the European Space Agency (ESA) (2008-2011). Prior to her appointment at UNOOSA in March 2014, she was Head of the European Space Policy Observatory at ASI Brussels.

She holds a Master's Degree in Astrophysics and Space Physics, and an Honoris Causa degree in Environmental Studies. She is Academician of the International Academy of Astronautics (IAA) and Member of its Board of Trustees. Ms. Di Pippo was knighted by the President of the Italian Republic in 2006. In 2008, the International Astronomical Union (IAU) named asteroid 21887 "Dipippo".

**15:15 – 15:30**

## **Keynote 6**



***Carine Claeys***

*Head of Space Task Force,*

European External Action Service (EEAS)

Belgium

Carine Claeys has been officially appointed EEAS Special Envoy for Space in June 2019 by the EEAS Secretary-General after serving as acting EEAS Special Envoy for Space since September 2018; representing the High Representative of the EU & Vice President of the European Commission. Mrs Claeys is still Head of the EEAS Space Task Force, set up in 2015. In that capacity, she advises the EEAS Secretary General on all space matters of EU interest and she chairs the Board of the EU Satellite Centre and the ad-hoc GNSS security experts group advising the EU Political and Security Committee in the framework of the Council's and High Representative's responsibilities to respond to possible threats linked to the European Global Navigation Satellite System (Galileo/Egnos), and also the international endeavour and diplomatic dialogue on Sustainability of space activities.

From 2011 to 2015 she was responsible of the corporate processes coordination in the newly set-up EEAS.

Before the EEAS was established, Carine Claeys served in the General Secretariat of the Council of the European Union. She was head of the "Security of space tools" cell (Galileo, GMES – then Copernicus) in the EU Situation Centre from 2005 to 2011. She was responsible for maritime transports and for transport intermodal questions and networks in DG Transports of the General Secretariat of the Council from 2000 to 2005, after having worked in several other sectors of this administration from 1992 on (mainly energy, human rights, United Nations, drugs, terrorism, agriculture and enlargement).

Carine Claeys holds a PhD in political sciences, a Master degree in business engineering, a Master degree in international relations and a Master degree in development cooperation.

**15:30 – 15:45      Keynote 7**



***H.E. Prof. Sarah Anyang Agbor***

*Commissioner in Charge of Human Resources, Science  
and Technology,  
African Union Commission  
Ethiopia*

She received her Educational training from the University of Ibadan, Nigeria. Before joining the African Union Commission, H.E. Prof. Sarah Anyang Agbor occupied various positions:

- Elected by the African Union during the June/July 2017 summit as the African Union Commissioner for Human Resources, Science and Technology, HRST.
  - She is leading three divisions namely: Education, Youth and Human Resources and Science and Technology.
  - She ensures the coordination of AU policies and programmes on human resource development matters, science and technology, encourage and provide technical support to Member States and RECs in the implementation of continental strategies such as CESA 16-24, STISA 2024 and the TVET strategy.
  - She plays key roles in promoting research and development and inter-African cooperation on education and training; encouraging youth empowerment and participation in the integration of the continent.
- She was the Deputy Vice-Chancellor in charge of Research, Cooperation and Relations with the Business World (DVC-RCB), University of Bamenda -North West Region of Cameroon.
- She previously served as Inspector of Academic Affairs No 2 and No 1 respectively at the Ministry of Higher Education, Cameroon, (MINESUP) during which she was responsible for evaluation and monitoring of Higher Education Institutions in Cameroon in strategic leadership, academic planning and quality, teaching and learning. She was the Focal Point for Pan African University; Conference of Ministers of Education in Africa (COMEDAF); Conference of Commonwealth Education Ministers and most of all UNESCO. Moreover, she represented the Cameroon Minister of Higher Education in several capacities.



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- Prof. Sarah Anyang Agbor is a Cameroonian and Professor of African and Commonwealth Literatures. She has supervised several students at the postgraduate levels at Maitrise, Master, FEA and PhD levels, sat in numerous juries, authored two textbooks, coauthored two books and over thirty peer reviewed book chapters and scientific publications. She was also a Visiting Fulbright Scholar in residence at the University of Scranton, PA in 2004-2005 where she taught Modern African Drama and Prose respectively and also created and African library for the school.

## 15:45– 17:15      **Session 2: Space Traffic Management**

Space activities are regulated by the five space treaties and agreed principles. Nevertheless, they do not provide a legal framework for space traffic management. With more actors in space, and an increasing reliance on space services, this is an issue that requires the attention of legislators.

### Moderation by:



***Kai-Uwe Schrogl***

*President,*

International Institute of Space Law (IISL)  
France

### Roundtable Discussion:



***Christophe Bonnal***

*Senior Launcher Expert,*

Centre National d'Études Spatiales (CNES)  
France



***Peter Martinez***

*President,*

Secure World Foundation (SWF)  
United States



***Wayne R. Monteith***

*Administrator of the Commercial Space Office,*

Federal Aviation Administration (FAA)  
United States





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***Elina Morozova***

*Head of the International Legal Service,  
Intersputnik - International Organization of Space  
Communications  
Russian Federation*



***Paulo Eduardo Vasconcellos***

*Director of Space Transportation and Licensing,  
Brazilian Space Agency  
Brazil*

**17:15**

## **Closing Remarks**



***Kendra Horn***

*Chairperson,  
U.S. House Science Subcommittee on Space and Aeronautics and  
Chair of the 10<sup>th</sup> IAF MOP Event,*

**17:45**

## **Adjourn**

**19:00**

## **IAF MOP Cocktail and Dinner**

***Shaw Ballroom - Residence Inn by Marriott  
901 L Street NW, 20001 Washington D.C.***