



UNITED NATIONS
Office for Outer Space Affairs



Biography Booklet

**UN/IAF Workshop on
Space Technology for Socio-Economic Benefits:
"Integrated Space Technologies and Applications
for a Better Society"**

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the United Nations Office for Outer Space Affairs
and
the International Astronautical Federation

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1. Ganiyu AGBAJE (ARCSSTEE, Nigeria)

Dr Ganiyu Ishola AGBAJE is currently the Executive Director, African Regional Centre for Space Science & Technology Education – English (ARCSSTEE), Nigeria - affiliated to the United Nations Office for Outer Space Affairs (UN – OOSA). Prior to this, he was the Director, Mission Planning, ICT and Data Management Department of the National Space Research and Development Agency [NASRDA] – Space Agency, Nigeria (2007 – 2014). Dr Agbaje was the Group on Earth Observation (GEO) - Principal for Nigeria (2010 – 2014) and serves in the GEO Excom, Institution & Development Board, and Data-Sharing Working Group (DSWG). Dr Agbaje is a Geoinformation expert, with PhD (Geography –Geomatics) degree from Lancaster University, UK; MPhil (GIS & Remote Sensing) from University of Cambridge, UK; and MSc & BSc (Hons) (Surveying) from University of Lagos, Nigeria.

2. Fernando AGUADO AGELET (CINAE & University of Vigo, Spain)

Fernando Aguado is Professor at the University of Vigo (SPAIN) as well as CTO at the Galician Aerospace Center (CINAE). His main areas of interest are system engineering for small satellites, Space communications and Small Satellite Constellations. He is the coordinator of the space activities at the University of Vigo, including the launch of 3 satellites within Xatcobeo Project, and HUMSAT project (including HUMSAT-D and Serpens Satellites). He has also coordinated the GENSO initiative and as Ground Station responsible of the ESA’s Projects ESEO and ESMO in phase B. He has also coordinated the phase A study of Dustcube (3U Cubesat), within the Asteroid Impact Mission (AIM) of the European Space Agency. He is currently coordinatin the FIRE-RS satellite financed by the European Union Programme, SUDOE. He holds Master and Ph.D. degrees from the University of Vigo.

3. Hiroki AKAGI (Japan Aerospace Exploration Agency, Japan)

Mr. Hiroki AKAGI is an Engineer in JEM Mission Operations and Integration Center, Human Spaceflight Technology Directorate, Japan Aerospace Exploration Agency (JAXA) in Tsukuba-shi, Ibaraki, Japan. He graduated from Tokyo Institute of Technology and has worked for the Environmental Test Technology Center in JAXA prior to joining JEM Team, as an engineer on mechanical research and structural dynamic test. He published several journal papers concerning vibroacoustic prediction aspects. Thereafter, He has joined JEM/Exposed Facility Payload Mission Team, and has been working for the JEM mission operations and integration, especially he is in charge of “Small Satellite Deployment Mission from Kibo” and “UNOOSA-JAXA KiboCUBE Programme ”

4. Luis M. ALFARO (El Salvador Aerospace Institute [ESAI], El Salvador)

Dr. Luis M. ALFARO is a technological expert at BK21 PLUS program which is managed by the National Research Foundation of South Korea. Dr. Luis M. Alfaro holds a degree in Port and Logistics Systems from Dong-A University, South Korea, a leading and historical University in Busan city. Mr. Luis is an exceptional leader who bases the inspiration as administrator and researcher in the

achievements obtained from his uncle Maximiliano Hernández Martínez, a former President of the Republic of El Salvador and General of the Army Forces (FAES). Dr. Luis M. Alfaro through ESAI aims to make efforts to cooperate, plan, implement and maintain a national aerospace program with space agencies, research & development institutes, universities, companies worldwide, etc. to benefit El Salvador's national future economy, improve life of citizens by using technology, innovated strategies and the foundations of a new business model.

5. Gustavo ARRIAGA (Mexican Space Agency, Mexico)

Gustavo Arriaga is the Space Applications Manager for Civil Protection in the Mexican Space Agency. In charge of develop new satellite application projects for social protection like natural disasters, floods, droughts and other issues in coordination with other public and private Mexican organizations, all this projects are based on earth observation data from several satellites. He was part of the MEXSAT project, the New Mexican satellites generation, analyzing, reviewing and approving functionality data test to ensure hardware on-board is operating as expected, during the integration and assembly line flow for one commercial satellite at Orbital Science Corp for MEXSAT program and responsible for Spacecraft Engineer Area (702 and STAR-2 bus) in the Mexico City Control Center.

6. Werner BALOGH (United Nations)

Dr. Werner Balogh is a Programme Officer in the United Nations Office for Outer Space Affairs in Vienna, Austria. Following several years of work with the Committee, Policy and Legal Affairs Section of the Office he is presently in charge of activities related to capacity building in space science and space technology development under the Office's Programme on Space Applications. From 1997 to 1999 he worked as the Associate Expert on Space Applications with the Office for Outer Space Affairs. In this function he coordinated the organization of the UN/IAF Workshops held from 1997 to 1999 and participated in the planning and organizing of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), held in 1999. Prior to rejoining the United Nations in 2006, Dr. Balogh worked for the Austrian Space Agency and for the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT). He holds Dipl.-Ing. and Dr. degrees in technical physics from the Vienna University of Technology, a MSc. degree in space studies from the International Space University and a MA degree in international relations from the Fletcher School of Law and Diplomacy.

7. Nickté BASURTO (Mexican Space Agency, Mexico)

Nickté Basurto is a student of the Bachelor of International Relations in the National Autonomous University of Mexico, Faculty of Political and Social Sciences. She is currently working with the Mexican Space Agency in the area of International Affairs and space security, her research has focused on space policy with emphasis on the Mexican situation facing the peaceful use of space, opportunities and setbacks. She also participated in the Manfred Lachs Space Law Moot Court Competition held this year in Washington, D.C, representing Mexico in its first participation.

8. Gerald BAWDEN (NASA, United States)

Dr. Gerald Bawden is the Program Manager for Natural Hazards Research at the National Aeronautics and Space Administration (NASA) headquarters in Washington, D.C. where he directs NASA's research on earthquakes, tsunamis, volcanic unrest, landslides, and land subsidence. He is a member of the Earth Surface and Interior and the Terrestrial Hydrology Focus Areas and helps manage the development of two new Earth Science satellite missions with anticipated launch dates in 2021: NISAR (NASA-Indian Space Research Organization Synthetic Aperture Radar) and SWOT (Surface Water Ocean Topography). Prior to joining NASA, he worked for the United States Geological Survey as a Research Geophysicist and the Chief Scientist of the Western Remote Sensing and Visualization Center in California. He holds a Masters and Ph.D. in geology from University of California and Davis

9. Suresh BHATTARAI (Nepal Astronomical Society, Nepal)

Suresh BHATTARAI is a Chairman in Nepal Astronomical Society (NASO). He started working for space science and astronomy outreach, education and research activities in Nepal since 2007. His outreach skills especially working with media is excellent. In order to stabilize his outreach efforts, he is working hard to introduce science journalism in Nepal. He is also working as Regional Coordinator for Asia Pacific in Space Generation Advisory Council (SGAC). He also served as National Point of Contact (NPoC) for Nepal during 2009-2013 and executive secretary during 2011-2013 at SGAC. He along with Yusuke Muraki created a regional program at SGAC in 2014 as Space Generation Workshop (SGW) which is now implemented in Asia Pacific, South America, Europe and Middle East regions are preparing for their first workshops. He holds masters degree in physics from the Tribhuvan University (TU), Nepal.

10. Olavo de O. BITTENCOURT NETO (Catholic University of Santos, Brazil)

Olavo de O. BITTENCOURT NETO is Professor Doctor at the Catholic University of Santos, Brazil and Post-Doctoral Researcher at the University of Sao Paulo, Brazil. Graduated at the University of Sao Paulo, concluding his Masters' and Phd thesis on relevant topics of Space Law. Member of Brazilian Delegations before the United Nations Committee on Peaceful Uses of Outer Space (UNCOPUOS). Elected to the Board of Directors of the International Institute of Space Law (IISL) in 2013. Member the Brazilian Association of Air and Space Law (SBDA). Vice-chair of The Hague Space Resources Governance Working Group.

Grantee of the Coimbra Group Scholarship Programme for Young Professors and Researchers from Latin America Universities (2011) and of the International Astronautical Federation Emerging Space Leaders Grant Programme (2012). Received the IISL Diederiks-Verschoor Award for the paper "The Elusive Frontier: Revisiting the Delimitation of Outer Space" (2012).

As a guest lecturer, presented researches and studies at universities and institutions from around the globe, including Leiden University, University of São Paulo, Air Force University of Brazil and Nova University of Lisbon.

Lecturer at Space Law Symposiums of the International Institute of Space Law (IISL) and the European Centre for Space Law (ECSL) before the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (2012 and 2016). Member of international boards of review of the Manfred Lachs Space Law Moot Court and the Sarin Air Law Moot Court.

Author of several publications in the fields of Space Law and Policy, including “Defining the Limits of Outer Space for Regulatory Purposes”. Springer, 2015.

11. Sergio CAMACHO (Regional Centre for Space Science and Technology Education for Latin America and the Caribbean, Mexico)

Dr. Sergio Camacho has been the Secretary General of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean for eight years. The Centre is affiliated to the United Nations and has a Campus in Brazil and a Campus in Mexico. He is also a former Director of the United Nations Office for Outer Space Affairs. During his career at UN-OOSA, he organized a large number of capacity building activities around the world and was responsible, among other things, for the establishment of UN-SPIDER. He was Chairman of the Working Group on Near Earth Objects (NEOs) of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS). That work led to the establishment of the International Asteroid Warning Network (IAWN) and of the Space Mission Planning Advisory Group (SMAPG). Dr. Camacho received his Ph. D. in Aerospace Science from the University of Michigan in the United States and his Bachelor’s degree in physics from the Universidad Nacional Autónoma de México (UNAM).

12. Antonio CASSIANO JULIO FILHO (National Institute for Space Resource, Brazil)

Antonio Cassiano Júlio Filho is graduated at Analysis and Development of Systems from FAETEC, Brazil and Master's (2015) at Space Engineering and Technology from Brazilian National Institute for Space Research (INPE) in São José dos Campos, Brazil. Has 30 years of the work at INPE in the Space Engineering and Technology in the area Ground Systems Development Division in the design, development, test and integration of the ground segment necessary for the tracking and control of satellite and processing to permit the dissemination of environmental data collected by satellites at INPE. Also is INPE Observer Member to the Cross Support Transfer Services Working Group of the CCSDS and Member of the Commission of Study CE:08.010.70/ABNT, of Brazil, to the review and to the development of Space Data and Information Transfer Standards, derived from CCSDS Recommendations.

13. Julio CASTILLO (Mexican Space Agency, Mexico)

Mr. Julio Castillo is currently the Director of Space Security at the Mexican Space Agency. He has worked in the private, government and NGOs sectors, mainly in topics such as finance for conservation, carbon market, water management, and development of renewable energy projects amongst others. In the public sector, he has worked at the US Agency for International Development

(USAID), and the Scottish Environment Protection Agency (SEPA). At the Mexican Government, he worked at the General Direction of Legal Affairs of the Secretariat of Communications and Transport. Mr. Castillo has a B.A. in International Relations from Universidad Iberoamericana in Mexico City, and a MSc. In Resource Management from the University of Edinburgh.

14. Amal CHANDRAN (Laboratory for Atmospheric and Space Physics, University of Colorado, USA)

Amal Chandran is a Project Manager at the Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado in Boulder, USA. At LASP, he oversees the development of CU's International Satellite Program in Research and Education (INSPIRE). INSPIRE is a consortium of Universities from around the world aiming to develop a university led satellite constellation for scientific studies. Amal also serves as LASP's Project Manager for the first INSPIRESat, a 3U cubesat, carrying an instrument suite for making ionospheric measurements scheduled for flight in 2018. Other tasks include development of CU's Massive Open Online Course (MOOC) on Spacecraft Design scheduled for launch in first quarter of 2017. He has also supported multiple proposals to NASA cubesat and small explorer AO's as project manager/engineer. Prior to joining LASP, he worked for the University of Alaska and the National Centre for Atmospheric Research, focusing on modelling and observations of the stratosphere and mesosphere. He holds a PhD in Aerospace engineering from the University of Colorado.

15. Remi CHANDRAN (Research Associate, National Institute for Environmental Studies, Japan)

Remi Chandran is a Research Associate, at the Center for Social and Environmental Systems Research (CSESR) at the National Institute for Environmental Studies, Tsukuba, Japan. His primary expertise is on the theory and practice related to the use and application of information technology in environmental governance, specifically related to enforcement information sharing in meeting the compliance requirements of UN multilateral agreements and Sustainable development goals. His broader research interests include international relations, environmental politics, negotiation, international institutions and global governance. Mr. Chandran carries with him 17 years of experience working primarily with United Nations and Government of India and has managed several national and international development projects in Asia and Africa.

His notable work has been the development of the 'Wildlife Enforcement Monitoring System (WEMS)' initiative, which was originally designing as a crowd sourced information collection mechanism. WEMS was later re-designed as a transboundary enforcement information sharing tool involving ground-level wildlife enforcement agencies. Mr. Chandran is also the Chief Technical Advisor to the WEMS-Initiative. He is also a member of the GEO Data Sharing Working Group.

Remi Chandran is a recipient of the Irish government bilateral fellowship (1995-97), the European Union Erasmus Mundus fellowship (2010) and the UNU-IAS PhD Fellowship (2012-2014).

16. Sergey CHERNIKOV (Adviser to the Rector of Samara State Aerospace University (SSAU), Russian Federation)

Mr. Sergey Chernikov currently is an Adviser to the Rector of Samara State Aerospace University (SSAU), in charge of developing and maintaining relations with international and intergovernmental organizations. Prior to joining SSAU, he worked more than 25 years as a Programme Officer in the United Nations Office for Outer Space Affairs and was in charge of activities related to capacity building in application of space science and technology under the Office's Programme on Space Applications. In this capacity, from 2003 to 2014 he was in charge of organizing UN/IAF workshops. He holds degrees in experimental nuclear physics from Saint Petersburg Polytechnic University.

17. Mengu CHO (Kyushu Institute of Technology, Japan)

Mengu Cho received the B.E. and M.E. degrees from University of Tokyo, Japan. He received his Ph.D. degree from the Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, USA, in 1992. After working at Kobe University and International Space University, he has been with Kyushu Institute of Technology (Kyutech), Japan, since 1996. Since 2004, he has been a Professor and also the Director of the Laboratory of Spacecraft Environment Interaction Engineering (LaSEINE) of Kyutech. LaSEINE is a research group with more than 10 academic staffs and 40 graduate students. His research interest includes spacecraft environmental interaction, especially spacecraft charging and small satellite reliability. He has supervised two nanosatellite projects. Currently, he is coordinating United Nations/Japan Long-term Fellowship Programme, Post-graduate study on Nano-Satellite Technologies (PNST).

18. Linda DAO (ISU SSP16, MSS17, Canada)

Linda Dao is the co-founder of the two-time award winning McMaster Observatory Outreach at Night (MOON) Club, which is also a SEDS-Canada chapter. Currently, Linda is the Education Officer of SEDS-Canada, and aims to spark greater awareness for space exploration throughout Canada. Recently, Linda also became the Canadian ambassador for Mars City Design. In 2013, Linda won the Canadian Space Agency's nationwide science challenge where her designed experiment was performed on the ISS by Commander Chris Hadfield. Linda was also on the organizing committee for the International Space Development Conference 2015. With a B.Sc degree in Biochemistry and a minor in French from McMaster University (Hamilton, Ontario), Linda has also recently graduated from the Space Studies Program by the International Space University. She soon embarks on the Masters of Space Studies program in Strasbourg, France.

19. José Eduardo DE LA TORRE (INEGI, Mexico)

Planning Director at the Vice Presidency of Geographic and Environmental Information in Mexico's National Institute of Statistics and Geography (INEGI). Previously, he has worked as an advisor on science and sustainable development at the Permanent Mission of Mexico to the United Nations, and as a consultant for the Organization of American States (OAS). He holds a degree in Biology from Mexico's National Autonomous University (UNAM), and a PhD in Comparative Genomics from New York University (NYU).

20. Simonetta DI PIPPO (United Nations)

Simonetta Di Pippo joined the UN Office for Outer Space Affairs on 23 March 2014.

After having graduated with a Master's degree in Astrophysics and Space Physics from the University "La Sapienza" in Rome, Italy in 1984, Ms. Di Pippo joined the Italian Space Agency (ASI) in 1986. Her responsibilities ranged from Earth Observation to Automation & Robotics, Science and Human Spaceflight. From 2002 to 2008, she served as the Director of the ASI's Observation of the Universe, since when in 2008 she got appointed Director of Human Space Flight at the European Space Agency (ESA), where she served in this role until 2001, before returning to ASI to lead the European Space Policy Observatory at ASI-Brussels until March 2014.

Ms. Di Pippo co-founded, in June 2009, Women in Aerospace Europe (WIA-E) and has acted as President since then. WIA-E, with a legal base in the Netherlands, aims to expand the representation and leadership of women in the aerospace sector. Since April 2013 she has been a member of the Global Board Ready Women (GBRW), the list of potential top managers created by European Business Schools in the framework of the Women on Board initiative. Appointed Academician of the International Academy of Astronautics (IAA) in July 2013, she has been appointed in the Board of Trustees of the Academy in 2015.

In May 2013 she received an Honoris Causa Degree in Environmental Studies from the St. John University in Vinovo (TO). She has been invited to teach at various Universities, including the George Washington University in Washington D.C. and the LUISS-Business School in Rome. From Nov. 1st, 2013 she is Visiting Scholar at CalPoly, CA.

Ms. Di Pippo was knighted by the President of the Italian Republic in 2006 and, in 2008, the International Astronomical Union assigned the name "dipippo" to asteroid 21887, in recognition of her effort in space exploration.

21. Karl DOETSCH (Canada)

Karl Doetsch currently provides consulting services in the aerospace sector. His career has spanned research, project management and executive leadership in the National Research Council of Canada and the Canadian Space Agency. He led the Canadarm project for the space shuttle and initiated and led the Canadian Astronaut program and Canada's contribution to the International Space Station program. He served as Vice President and Acting President of the Canadian Space Agency. He was President of the International Space University for six years during its formative years in Strasbourg, France. He was President of CASI and of the IAF and was Chair of UN COPOUS Scientific and Technical Committee when it was charged with implementing Unispace 3 recommendations. As Chair of the IAF IPC in 1991 and 1992, he led the efforts to establish the UN/IAF workshops, with the first being hosted in Montreal in 1991.

22. Isabelle DUVAUX-BECHON (European Space Agency, France)

Isabelle Duvaux-Béchon is the Head of the Global Challenges and Partnerships Coordination Office in the Strategy Department of the European Space Agency (ESA), based at ESA HQ in Paris, France.

Following 28 years of work within ESA in engineering and management positions (Microgravity, ISS, Budget, Education, General Studies and Advanced Concepts, Finance), she is since January 2016 in charge of the Office for the coordination of transverse initiatives (Space & Energy, Oceans, the Arctic, Antarctic, Sustainable Development, Health...) and partnerships with non-space entities. This builds upon work she performed since 2009 on those transverse initiatives in parallel to other duties. Prior to joining ESA, she worked several years in industry with Matra Espace. She holds an engineer diploma (master level) from the Ecole Centrale de Paris, with aeronautical and space specialisation. She is a corresponding member of IAA.

23. Pascale EHRENFREUND (Chair - DLR Executive Board, Germany)

Pascale Ehrenfreund has been Chair of the DLR Executive Board since 17 August 2015. Born in 1960, Ehrenfreund obtained degrees in Astronomy and Biology at the University of Vienna, where she also earned her doctorate in 1990. Ehrenfreund held a professorship in Astrobiology at the University of Amsterdam and the University of Leiden, where she remains a Visiting Professor today. In addition, between 2005 and 2008 she was a Distinguished Visiting Scientist at the Jet Propulsion Laboratory in Pasadena, USA, which is part of the California Institute of Technology. Ehrenfreund obtained a Master of Arts in Management and Leadership in 2008. Since then, she has been Professor of Space Policy and International Affairs at the Elliott School of International Affairs, George Washington University, and Lead Investigator at the NASA Astrobiology Institute. From 2013 to 2015 she headed the Austrian Science Fund (FWF), from which she stepped down upon her appointment at DLR.

24. Stefano FERRETTI (ESA)

Dr. Stefano Ferretti is an ESA Space Policy Officer, seconded to the European Space Policy Institute, where he manages the research "Space for sustainable development". Before he worked as Energy and Infrastructure Manager at ESA/ESRIN, as ISS project manager at ESA/ESTEC and at Thales Alenia Space. He received the International Astronautical Federation Napolitano Award, he holds a PhD and a Master in Mechanical Engineering from the University of Bologna, a Master of Space Studies from the International Space University, and he studied space policy and law, innovation, entrepreneurship, and leadership, at George Washington University and at MIT.

25. Oswaldo GARCIA (Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico)

Oswaldo Garcia is the Chief Operating Officer for Skysset, a UAV based company located in Monterrey, Mexico. His role in the company is directing the operations of drone pilots, controlling flight activities, research and development areas. He has currently been working on the Atmospheric Microorganism Sampling Probe, a research project designed to study microscopic life in the upper atmosphere. During his time at Tec de Monterrey (ITESM), he founded XNAO Aerospace, a multidisciplinary student group which successfully launched a high altitude balloon to 71,000ft to collect meteorological data. Mr. Garcia earned a BSc in Mechatronic Engineering with minors in Aerospace and Robotics.

26. Rushi GHADAWALA (Aryavarta Space Organization, India)

Dr. Rushi GHADAWALA is the Founding President of Aryavarta Space Organization, based in India (pioneer of private space R&D organization in India) and operating among four countries in three continents at international front. Following his several years of research experience with Space Science and Technology, he is leading the entire organization with all four entities – Science & Technology, Legal issues and Policy framework, Health issues and Aeromedicine, and Space Applications for Climate Change. He is also presently leading newly registered private limited company in the North America – B R Aerospace Solutions and Services, registered into Canada. Dr. Ghadawala holds an international patent, many international distinguished publications and has been decorated with various prestigious decorations at global level, for his research and development in the field of Space Sector. He holds degree in Space Engineering with dual specialization – space debris removal and space applications for climate change. He is also recipient of honorary doctorate for his research leading to an efficient space vehicle system for active debris removal, using solar energy.

27. Christina GIANNOPAPA (ESA)

Dr. Christina Giannopapa is a senior advisor in the Department for Relations with Member States in the Cabinet of the Director General of the European Space Agency (ESA) in Paris. She is responsible i.a for Parliamentary affairs and for leasing with Member States. From 2010 to 2012 she has been seconded from the Agency as Resident Fellow at the European Space Policy Institute (ESPI) in Vienna, where she has been supporting the European Interparliamentary Space Conference (EISC) and lead studies on innovation, Galileo, Copernicus and Africa. In the policy areas she also worked briefly in DG Research, European Commission. From 2007 to 2010, she has been working in the Mechanical Engineering Department of the Technical and Quality Management Directorate of ESA in the Netherlands. Prior to joining ESA she has worked as a consultant to high-tech industries in research and technology development. She held positions in academia in Eindhoven University of Technology, the Netherlands and in the University of London, UK. She has received 14 academic scholarships and awards and has 40 publications in peer-reviewed journals and conferences. She holds a PhD in Engineering and Applied Mathematics; an MEng in Manufacturing Systems Engineering and Mechatronics; and an MBA in International Management from the University of London, UK. Additionally, she holds an assistant professor position in multiphysics at Eindhoven University of Technology. She is the chair of the Fluid Structure Interaction (FSI) Committee of the American Society of Mechanical Engineers (ASME) and is the secretary of the Committee for Liaison with International Organisations and Developing Nations (CLIODN) of the International Astronautical Federation (IAF).

28. Misha GOPAUL (FATMAP, UK)

Misha Gopaul is founder and CEO of FATMAP (Terrascope Limited) – developer of a high resolution 3D computational map platform for the world's non-urban environments. Providing resolutions of up to 2m for elevation models and 25cm imagery, FATMAP enables fully offline maps on mobile devices for on the ground decision making and information sharing. FATMAP's existing products target the consumer outdoor sports market and are currently looking for partners to conduct pilots in Disaster Response, Search & Rescue and other fields. Prior to founding FATMAP Misha was Founder and CEO of Fabric Technologies. He has nearly two decades of experience founding

and running technology companies and is a strong believer in innovation and technology to improve the world.

29. Juan Esteban GRAMAJO GONZALEZ (ISU, France)

Juan Esteban Gramajo Gonzalez is an Aerospace Engineer from Guatemala. He graduated from the Samara State Aerospace University in Russia. Then he continued his studies at the International Space University with a Master in Space Studies. He has been an active member since he got acquainted with SGAC at the UN COPUOS 2015. He was the National Point of Contact for Guatemala at the SGAC and is currently the Regional Coordinator for the North, Central America and Caribbean Region. He is currently organizing an event for the World Space Week, SG[Guatemala]. Also, he is an active member of the Space Law and Policy Project Group contributing in several of its projects.

30. Camilo GUZMÁN GÓMEZ (University Sergio Arboleda, Colombia)

Camilo Guzmán Gómez is director of the Public Law research Group CREAR, at the University Sergio Arboleda. He has extensive experience as professor on issues of constitutional, administrative and international law and multiple papers and articles on space law. He has collaborated with the Colombian Space Commission. He holds degrees in Law from the University Montesquieu – Bordeaux IV, and a master in Public law from the same institution. He is member of the International Institute of Space Law.

31. Kiyoshi HIGUCHI (IAF / JAXA)

Kiyoshi Higuchi is President of the International Astronautical Federation (IAF) and Technical Counselor of the Japan Aerospace Exploration Agency (JAXA). In 2012 he was elected President of the IAF, an international federation of more than 280 space-related organizations from 64 countries, and is currently in his second term. Formerly, Mr. Higuchi was the Senior Vice President of JAXA from April 2010 to March 2015. He was one of the Executive Directors of JAXA at the time of its foundation in 2003. Having started his career as a system engineer with the National Space Development Agency of Japan, which later merged into JAXA, Mr. Higuchi pioneered the fields of space development and human space exploration in Japan, closely working with international partners including the US, Europe, Russia and many others. Mr. Higuchi received his undergraduate degree in mathematics from Nagoya University and his Master's degree from the Massachusetts Institute of Technology (MIT).

32. Jeanne HOLM (City of Los Angeles, USA)

As a leader in open data, education, community-building, and civic innovation, Jeanne Holm empowers people to discover new knowledge and collaborate to improve life on Earth and beyond. From astronauts in orbit to rural villagers in Uganda, billions of people use her systems to find the data, information, and knowledge they need to make better decisions every day. Jeanne is the Deputy CIO and Senior Technology Advisor to the Mayor of the City of Los Angeles. As a senior consultant

with the World Bank, she empowers governments and civil society to use open data to increase prosperity and civic good. As the former Evangelist for Data.Gov (an open government flagship project for the White House), Jeanne led collaboration and built communities with the public, educators, developers, and governments in using open government data. She served as the Chief Knowledge Architect at NASA's Jet Propulsion Laboratory at the California Institute of Technology. She is the CIO and Director for Education for United Earth, a charity that promotes peace and social justice through education and music. She drives innovation through collaborative systems, knowledge sharing, and social platforms. She architected systems and managed teams from the award-winning NASA public portal to pioneering knowledge architectures within the U.S. Department of Defense. She is a Distinguished Instructor at UCLA, teaching courses in knowledge management, big data, and civic innovation. She is a Member of the International Academy of Astronautics, co-Chair of the Africa Open Data community, and has more than 130 publications on innovation, open data, information systems, and knowledge management.

33. Pasquale IERVOLINO (University of Surrey, United Kingdom)

Pasquale Iervolino was born in Naples, Italy, on August 16, 1985. He received the B.S. and M.S. (both cum laude) degrees in telecommunications engineering from the University of Naples Federico II, Naples, in 2008 and 2010, respectively. In 2012 he joined the Surrey Space Centre, University of Surrey, Guildford, U.K., where he was awarded the PhD in electronic engineering in 2016. Since 2015, he is working as Research Fellow at the Surrey Space Centre within the International Partnership Space Programme Mexico for the preservation of the Bacalar area. His research interests include microwave remote sensing, the development and inversion of scattering models from natural and man-made surfaces, and synthetic aperture radar ship-detection algorithms. He was the recipient of the Student Paper Award published on the IEEE Proceedings of the 2015 Asia-Pacific Conference on Synthetic Aperture Radar (APSAR).

34. Donald JAMES (NASA, United States of America)

Donald James is responsible for developing and implementing education programs that strengthen student involvement and public awareness about NASA scientific goals and missions. He leads the agency in inspiring interest in STEM, through NASA's unique mission, workforce, facilities, research and innovations. Prior to his appointment, James was director of the Strategic Communications and Education Directorate at NASA's Ames Research Center. In this capacity, he oversaw operations of all communications, education and public outreach functions for the center and supported initiatives to engage a variety of internal and external audiences. During more than 30 years at NASA, he has served in numerous capacities, including public affairs, human capital management and strategic communications.

35. Shantosh KARKI (UNOCHA, Somalia)

Shantosh Karki is an Information Management Officer/GIS specialist in the United Nations Office for coordination of humanitarian affairs (UNOCHA) in Somalia since February 2015. His duties and responsibilities include: focus on contributing to information products, disaster preparedness, conducting assessments, preparing different kinds of map including IDPs, floods, drought using

satellite data and remote sensing, resource, risk, livelihood zonal maps etc. Also, he is serving as vice president of Go Green Nepal (www.gogreennepal.org.np), which works in environmental conservation sector in Nepal. Academically, Mr. Karki possess a master's degree in Development Management(2013) from the Asian Institute of Management, 2013 Philippines and a master's degree in Environmental Science(2009) from Tribhuvan University, Nepal.

36. Rei KAWASHIMA (UNISEC-Global, Japan)

Rei Kawashima cofounded and has served the University Space Engineering Consortium (UNISEC), an educational non-profit organization that aims to support, facilitate and promote practical space projects such as building and launching hand-made satellites and hybrid rockets at university level, as Secretary General from 2002 to 2011, and as Chair of Committee for International Relations from 2011 to present. In 2013, the UNISEC-Global, an international university organization/community, was established and she has been appointed to the first Secretary General. Since then she worked for realizing "Vision 2020-100" which is "By the end of 2020, let's create a world where university students can participate in practical space projects in more than 100 countries." She obtained M.A. in Leadership Studies from Azusa Pacific University, USA and M.S.S. from International Space University, France.

37. David KENDALL (Chair of COPUOS)

David Kendall is currently the Chair of the United Nations Committee on the Peaceful Uses of Outer Space. He is also a faculty member of the International Space University. He retired in 2015 from the Canadian Space Agency after more than 32 years, holding senior positions including as Director General of the Space Science and Space Science and Technology branches of the Agency. He received his doctoral degree in atmospheric physics from the University of Calgary. He is an academician of the International Academy of Astronautics and has held senior roles in the IAF (Vice President), COSPAR (Bureau), IADC (Chairman), ESA (member of the Council) and at the ISU (Chairman of the Academic Council, member of the Board of Trustees, Director of the SSP). In 2002, Dr. Kendall was awarded the Queen Elizabeth II Golden Jubilee Medal in recognition of his significant contributions and achievement to Canada.

38. Ramesh S. Krishnamurthy (WHO)

Dr Ramesh S. Krishnamurthy holds a PhD degree in Physical Anthropology from University of Oregon with MPH in Health Services Management from University of California, Los Angeles in the United States. In addition, he holds two other Master of Science degrees in biological sciences from the United States. Currently, Dr Krishnamurthy currently serves as a Senior Advisor within the Health Systems and Innovation cluster of WHO Headquarters in Geneva, Switzerland. Prior to this assignment, he had worked as Senior Advisor and Health Scientist at the Coordinating Office of Global Health at U.S. Centers for Disease Control and Prevention in the United States. He also serves as Associate Professor and Assistant Dean at the University of Pacific in California.

39. LeRoy LARRY (University of Costa Rica, Costa Rica)

LeRoy Larry is a Professor of Physics at the University of Costa Rica, San Jose, Costa Rica. He has been involved in space physics and astrophysics research at the NASA Jet Propulsion Laboratory and NASA Marshall Space Flight Center, and in high energy particle physics research at the Fermi National Accelerator Laboratory. He is presently conducting astrophysics research at the Center for Space Research, and giving lectures in astronomy and astrophysics at the Planetarium of San Jose as part of the community outreach program. As a delegate from Costa Rica to the 59th session of the Committee On the Peaceful Uses of Outer Space, he presented a proposal to create an office to organize and coordinate Human Space Technology Initiative outreach activities from the UN-OOSA platform. He was the invited Guest Speaker and Professional Trainer at the National Workshop on Astronomy for Teachers in Ondo State, Nigeria.

40. Christiane LECHTENBOERGER (DLR, Germany)

Christiane Lechtenboerger is a scientific officer at the German Aerospace Center DLR, affiliated to the policy unit of DLRs Chair of Executive Board. She maintains the interface between DLR, here focusing on space related affairs, and UNOOSA and UNCOPUOS. She coordinates DLRs scientific experts in the field of UNCOPUOS and its subcommittees and main committee as well as the interface to superior ministries as the Federal Ministry for Economic Affairs and Energy and the Federal Foreign Office. Besides that she coordinates DLR activities jointly together with UNESCO, UNU or WFP.

41. Jean-Yves LE GALL (CNES, France)

Jean-Yves Le Gall is President of the Centre National d'Etudes Spatiales (CNES), the French space agency. In this capacity, he is interministerial coordinator for satellite navigation programmes and Chair of the Administrative Board of GSA, the European GNSS Agency. He is also Co-Chair of the Council of the European Space Agency (ESA) and President Elect of the International Astronautical Federation (IAF). Born in 1959, Jean-Yves Le Gall is a qualified engineer and scientist who has devoted his entire career to the European space programme. He is a member of the International Academy of Astronautics (IAA) as well as numerous international think tanks, and has received awards from organisations worldwide plus the Governments of France, Russia and Japan.

42. Attila MATAS (ITU)

Mr. Attila MATAS serves as Head of the Space Publications and Registration Division in the ITU BR Space department. He is responsible for the processing and publication of GSO and non-GSO space systems and Earth stations submitted by administrations for inclusion in the formal coordination procedures or recording in the Master International Frequency Register. He has been heavily involved in the ITU BR since 1993 in the development and efforts to treat the space notices using computer tools for data capture, validation and publishing, resulting in the adoption of BR IFIC publication on DVD-ROM, mandatory electronic filing and the BR Space database systems on-line.

Mr. Matas representing the ITU at the UN COPUOS and ICG and he is active participant on the WRC since 1992. On a several WRC he served as a secretary on the agenda items related to frequency allocations and regulation of RNSS and active or passive space sensors.

43. Milan MIJOVIC (Law School Union University, Serbia)

Milan Mijovic is a Space law Teaching assistant at Law School Union University in Belgrade, Serbia. Following several years of Space law research and practise, participation at IAC 2015 and Manfred Lachs Space law Moot competitions, as well as his appointment as the first Space law Teaching assistant in Serbia, Milan became a founder and a President of Serbian office for Space sciences, research and development (SERBSPACE) in August 2016. He is Master of Laws, and is currently enrolled at PhD studies at Law School Union University in Belgrade, Serbia with doctoral dissertation relating to Problems of regulation of Property rights in Space, Moon and other celestial bodies. He also holds a specialization degree as a professional translator for English and German language. Milan is recipient of several national and international Space law acknowledgements.

44. Chiaki MUKAI (JAXA, Japan)

Dr. Chiaki Mukai is a Vice President of Tokyo University of Science (TUS). She started her career as a doctor in the field of surgery in 1978 and was selected as one of the Japanese Payload Specialists (PS, Science Astronaut) in 1985. After she gained her career as a scientist in Johnson Space Center and several universities, she was assigned to space missions from 1992 to 2003 including Space flights on 1994 and 1998. Making the best use of space missions and her career as a doctor, she provided her specialized knowledge on space medicine and human space exploration health management for the ISU Master Program students at the International Space University from 2004 to 2007. From October 2007 to March 2011, she served as Director of the Space Biomedical Research Office, Human Space System and Utilization Mission Directorate of JAXA. Currently Dr. Mukai has been serving as a JAXA Senior Advisor and Vice President of the TUS (from April 1, 2015).

45. Ronnie NADER (Cdr EXA, Ecuador)

First Ecuadorian Astronaut, 2007

Designer of the Ecuadorian Space Program, 2007

Space Operations Director for the Ecuadorian Space Agency

Mission Commander for the DAEDALUS missions, 2008

Mission Commander for POSEIDON - Microgravity world record 2008

Chief Designer of Project HERMES - The first Internet-to-Orbit gateway. 2009

Chief Engineer/Team leader for the 1st and 2nd Ecuadorian satellites, 2010-2012

Mission Director for NEE-Alpha satellite constellation launch and operation. 2013

Mission Supervisor for IRVINE01 mission on the IRVINE Cubesat STEM Program, 2015

ACADEMIC MEMBERSHIPS

IAF Space Security Committee - Permanent Member

International Academy of Astronautics - Corresponding Member

American Association for Advancement of Science - AAAS - Fellow Member

ACADEMIC DEGREES

MS Systems Engineer - Universidad Católica Santiago de Guayaquil - UCSG – 1994

Astrobiology Professor - TERC - 2001

46. Narayan Prasad NAGENDRA (Dhruva Space, India)

Narayan Prasad is PhD candidate at the Business School of University of Erlangen Nuremberg. He has previously worked with the Indian Institute of Astrophysics and DLR Institute of Space Systems, Germany. In 2012, He co-founded Dhruva Space, a NewSpace company based out of Bengaluru, India and also curates NewSpaceIndia, an online publication of views for Space 2.0 India. He holds degrees in Space Technology from Lulea Technological University (Sweden), Space Techniques and Instrumentation from Université Paul Sabatier (France), and Space & Telecommunications from NALSAR University of Law (India).

47. Sandra I. RAMIREZ JIMENEZ (Universidad Autónoma del Estado de Morelos, Mexico)

Dr. Sandra I. Ramírez Jiménez is a researcher professor at the Centro de Investigaciones Químicas of the Universidad Autónoma del Estado de Morelos. She got a PhD in Chemistry at the Facultad de Química of the Universidad Nacional Autónoma de México (UNAM) and a PhD in Sciences at the Université de Paris XII Val de Marne. She obtained the Weizmann Prize in 2001.

Her research is devoted to the characterization of planetary atmospheres by diverse instrumental techniques, and to the study of the adaptation strategies displayed by halophilic bacteria in scenarios of astrobiological importance. She is a member of the National Research System (SNI II), and of other different national and international academic societies (SOMA, IAA). She is the author of numerous research papers, book chapters, and scientific diffusion papers.

She served as President of the Mexican Astrobiology Society, where she worked intensively on the promotion of astrobiology in Mexico organizing several academic and outreach activities. She was invited by the Mexican Space Agency (AEM, in Spanish) to be the ICP-CoChair for the International Astronautical Federation Congress in 2016.

48. Preethi Sanath PANAWENNAGE (Arthur C Clarke Institute for Modern Technologies, Sri Lanka)

Eng. Sanath Panawennage is the Director General & CEO of the Arthur C Clarke Institute for Modern Technologies (ACCIMT), Sri Lanka. Prior to his current assignment, from 2001 to 2008, he served as the Deputy Director General in Charge of Engineering of Sri Lanka's National Radio, SLBC. He is a Chartered Engineer specialized in Electronic and Telecommunication Engineering, and a Fellow of the Institution of Engineers, Sri Lanka. His other postgraduate and professional qualifications include MSc, MBA., and Membership of the Institution of Engineering and Technology, MIET(UK). In his current capacity as the DG & CEO of the ACCIMT he has formulated and embarked upon implementing a national roadmap for space technology capacity development in Sri Lanka.

49. Camilo Andres REYES MANTILLA (Space Generation Advisory Council, International Space University, Colombia)

Camilo is a Mechanical Engineering Senior Student at Fundación Universitaria Los Libertadores in Bogota, Colombia. He made a research internship in the aeromechanics branch at NASA Ames Research Center in 2014, as well as a research visit in ion propulsion at the National Institute for Space Research of Brazil - INPE. He is a member of the Space Generation Advisory Council and Alumni of the Space Studies Program at International Space University. In 2015 he participated with SGAC in the 58th session of the United Nations Committee on Peaceful Uses of Outer Space in Vienna, Austria.

50. Pedro Xabier RODRIGUEZ (National Emergency Commission, Dominican Republic)

It is the General Coordinator Multidisciplinary Team largest Geospatial Information Dominican Republic; called (EIGEO), which has the mission to collect, manage and generate information to support making policy and operational decisions in the phases of prevention, mitigation, response and disaster recovery. In 2015 it has been promoted to General Coordinator of National Integrated Information System for Risk Management (SINI). It is the focal point for the Mesoamerican Territorial Information Network, Mesoamerica Project for their country. He has over 10 years of experience in the area of Disaster Risk Management. Study Information Technology in Higher Technological Institute American (ITLAS)

51. Avid ROMAN GONZALEZ (Image Processing Research Laboratory - INTI-Lab - Universidad de Ciencias y Humanidades - UCH, Peru)

Avid ROMAN GONZALEZ is Coordinator of the Image Processing Research Laboratory (INTI-Lab) at the Universidad de Ciencias y Humanidades (UCH) of Peru. After two years of work teaching different courses to electronics engineering students, he is presently in charge of research activities looking for funding resources. Prior to joining the Universidad de Ciencias y Humanidades, he worked for the French Aerospace Agency (CNES), for the German Aerospace Center (DLR), and for the Universidad Peruana Cayetano Heredia (UPCH). He holds a B.S. degree in electronics engineering from Universidad Nacional San Antonio Abad del Cusco, B.S. degree in system engineering from Universidad Andina del Cusco, M.Sc. degree in Human and Industrial Automatic from Université Paul Verlaine de Metz, and a Ph.D. degree in Signal and Image Processing from TELECOM ParisTech.

52. Camilo Hugo ROTELA (Comisión Nacional de Actividades Espaciales, Argentina)

Dr. Camilo Rotela is a Specialist in the use of spatial information applied to health and the development of predictive models, at Comisión Nacional de Actividades Espaciales (CONAE). Following 15 years of work with CONAE, in conjunction with Health National Ministry, he is

presently in charge of activities related to space technology apply to Dengue Operative Systems under Consultant of Space Applications to early warning and response to emergencies unit (CAEARTE). Prior to joining the CONAE, he worked for Cordoba Environment Secretariat and for Cordoba National University (UNC), for the construction of Parasites food webs, for biological control applications and the develop of sustainable projects under Inter American Development bank (IDB). He holds degrees in Biology and PhD in biological sciences of UNC, in Development of Dengue epidemiologic risk Models and remote sensing indicators in Argentina.

53. Barbara J. RYAN (GEO Secretariat, Switzerland)

Barbara J. Ryan is Director of the intergovernmental Group on Earth Observations (GEO) located in Geneva, Switzerland. She is responsible for coordinating the activities of 103 Member States and 103 Participating Organizations who are integrating Earth observations in eight important areas, including agriculture, biodiversity, climate, disasters, energy, health and water. Under her leadership, at the U.S. Geological Survey (USGS), the Landsat data policy was changed to release all data over the internet at no charge -- an action that has resulted in the global release of more than 41 million Landsat scenes to date. She holds a Bachelor's degree in Geology, State University of New York at Cortland, a Master's degree in Geography, the University of Denver, and a Master's degree in Civil Engineering, Stanford University. She was recently awarded an honorary Doctor of Science degree from the State University of New York at Cortland.

54. Luciano SACCANI (Sierra Nevada Corporation's Space Systems)

Mr. Saccani joined Sierra Nevada Corporation's Space Systems in 2014 and now holds the position of Director for International Business Development to address business acquisition and customer relations around the world. During his career Mr. Saccani worked in all major areas of the space business including human spaceflight, space transportation, remote sensing, telecommunications, and navigation. Before joining SNC, Mr. Saccani worked in the US from 1992 to 2013 for the Space Subsidiary of Finmeccanica. In 2001 he was appointed as CEO of Alenia Spazio North America. During his career he managed business development and strategies in Japan and North America and played a primary role in the development, negotiations and signature of key alliances between European and US industries. Mr. Saccani holds a Degree of Doctor in Electronic Engineering from the University of Rome La Sapienza, in Italy, a Post Graduate Diploma in Business Administration from the Edinburgh School of Business, in Scotland, UK and attended the Stanford University Advanced Management College. Mr. Saccani is citizen of both the United States and Italy.

55. Giancarlo SANTILLI (University of Brasilia, Brazil)

Assistant Professor at University of Brasilia (UnB) from 2015.

Consultant of the AEB (Brazilian Space Agency) and CENSIPAM (Operative Centre for Protection of the Amazon Forest) from 2016.

Ph.D. in Aerospace Engineering at the School of Aerospace Engineering - University of Rome. Master of Science in Electronics & Aerospace Engineering at the University of Rome "La Sapienza".

Assistant Researcher at San Marco Project Research Centre (2004 – 2013) and Consultant at Telespazio SpA, a Leonardo company (2013 – 2015).

Main research areas in the fields of Earth Observation & Remote Sensing, Orbital Dynamics, Analysis of Space Missions and Telemetry, Tracking and Control (TT&C) activities.

Author of over 40 scientific articles.

56. Gunter SCHREIER (DLR, Germany)

Gunter Schreier is deputy director of the DLR German Remote Sensing Data Center (DFD). He is coordinator for large scale projects especially in the context of the European earth observation system Copernicus and earth observation projects with international partners and coordinating the earth observation payload data ground segment. He has served at DLR in several functions since 1985, among others as team leader for establishing the SAR geocoding functionalities of the ESA ERS-1/2 „Processing and Archiving Center“, also applied for SRTM. He also worked as national expert at the Joint Research Center of the European Commission, in Ispra, Italy, and was founding Vice President Geomatics of Definiens, Munich. Currently, he is Chairman of the International Astronautical Federation (IAF) Earth Observation Committee, and Chairman of the International Policy Advisory Group (IPAC) of ISPRS.

57. Rogel Mari SESE (National Space Development Program, Philippines)

Dr. Rogel Mari Sese is the Program Leader of the National SPACE Development Program and Focal Person of the Philippine Space Science Education Program, both under the Department of Science and Technology (DOST) in the Philippines. He is currently in charge of planning and developing the national space policy and long-term space program of the Philippines that would lead to the creation of a National Space Agency. He holds an undergraduate degree in Applied Physics from the University of the Philippines Los Banos, a Masters in Physics degree from the University of the Philippines Diliman and a doctorate in Physics (Astrophysics) from the University of Tsukuba, Japan. He has also represented the Philippines in various international conferences and organizations related to astronomy, space policy and space science development.

58. Fernando STANCATO (EMBRAER, Brazil)

Fernando Stancato is a Product Development Engineer for EMBRAER, São Paulo, Brazil and researcher at University of São Paulo. Before joining Embraer he was Director of a aerospace research group at UNOPAR university, been responsible for several projects as the first Brazilian academic nano satellite project, sub orbital experiments and experimental rockets. At International Astronautical Federation served as Vice Chair of Space Education and Outreach Committee from 2001 to 2005. He holds degrees of graduation, Masters and PhD in Mechanical Engineering at Polytechnic School in University of São Paulo. Nowadays works in the Defense and Security Department been responsible for space segment development studies.

59. Luc ST-PIERRE (United Nations)

Luc St-Pierre (M.Sc. Geography, University of Sherbrooke, Canada and M.Sc. Environmental Economics, Wye Imperial College, University of London) is a Geographer born in Québec, Canada. He worked at developing geographic information systems for the management of the environment and natural resources in Africa, Asia and Latin America in the 1990's before joining the United Nations in 2000. He first helped developed datasets and GISs for the UN Environment Programme (UNEP) in its work to protect marine biodiversity in the Caribbean Sea and control marine pollution. Between 2005 and 2012 he strengthened the mapping, remote sensing and GIS capabilities of the UN High Commissioner for Refugees (UNHCR) to improve the support and assistance during humanitarian crisis. He joined the UN Office for Outer Space Affairs (UNOOSA) in 2012 to supervise the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER). Since April 2016, Mr. St-Pierre is Chief of the Space Applications Section of UNOOSA.

60. Wei SUN (Twenty First Century Aerospace Technology Co. Ltd., China)

Dr. Wei Sun was the Director of Marketing, Business Development and Sales in SSTL of UK when she had conceived and developed the internationally coordinated Disaster Monitoring Constellation (DMC); consequently received the Allan Emil Memorial Award in IAF 2009. At OHB of Germany, she at the position of International Marketing Director had promoted multilateral cooperation on the CarbonSat Constellation - a global Greenhouse gases measurement system and generated strong interests worldwide. Before taking on the responsibility in 21AT, she was the Managing Director of Dauria Aerospace that is created by a Russian space entrepreneur for changing the economy of space.

61. Reuben UMUNNA (Kyushu Institute of Technology, Japan)

Reuben Jikeme Umunna is a PhD student at Kyushu Institute of Technology, Japan. He joined National Space Research & Development Agency (NASRDA), Nigeria in 2007 and is currently a principal engineer with the Agency. In the capacity of a propulsion engineer, Reuben participated in the Know-How-Technology-Transfer program that saw the build of NigeriaSat-2 and NigeriaSat-x earth observation satellites in conjunction with Surrey Satellite Technology Limited. He has previously earned a BSc in Mechanical engineering from University of Benin, Nigeria and a Masters in Aerospace Engineering from University of Salford, England.

62. Natalia Indira VARGAS CUENTAS (Universidad Peruana Cayetano Heredia of Peru)

Natalia Indira VARGAS CUENTAS is an External Researcher of the Research and Development Laboratory (LID) at the Universidad Peruana Cayetano Heredia of Peru. She also is a Co-coordinator of the Image Processing Research Laboratory (INTI-Lab) at the Universidad de Ciencias y Humanidades (UCH) of Peru. She is presently following her Master's studies in Remote Sensing and Geo-Information Systems (RS & GIS) in Beihang University (BUAA). Prior to joining the Universidad Peruana Cayetano Heredia and the Universidad de Ciencias y Humanidades, she worked

as a Project Engineer in the areas of video surveillance, and fiber optics projects in the company NEXUS BOLIVIA. She holds a B.S. degree in electronics engineering from Escuela Militar de Ingeniería, La Paz. She is the National Point of Contact of Bolivia (SGAC). And she is the organizer of the first and second Aerospace Bolivian Conference.

63. Koichi WAKATA (Japan Aerospace Exploration Agency (JAXA))

After selected as an astronaut candidate by the National Space Development Agency of Japan (NASDA, currently JAXA) in 1992, Dr. Wakata flew on four space flights (STS-72, STS-92, STS-119/ISS Expedition 18/19/20/STS-127, and Soyuz TMA-11M/ISS Expedition 38/39) and has accumulated 347 days 8 hours 33 minutes in space. On ISS Expedition 39 in 2014, Dr. Wakata served as the first ISS Commander from Japan. In April 2016, he was named as the ISS Program Manager and the Director of JEM Mission Operations and Integration Center of JAXA.

64. Chris WELCH (International Space University, France)

Dr Chris Welch is Professor of Space Engineering at the International Space University in Strasbourg France and IAF Vice President for Education and Workforce Development. He is a member of European Commission H2020 Space Advisory Committee. His research interests are in space propulsion, microgravity science and planetary exploration. He has a significant track record in both space education and outreach and higher education, receiving the 2009 Sir Arthur Clarke Award for Space Education and 2015 IAF Distinguished Service Award. Dr Welch is Vice-President of the British Interplanetary Society, of which he is a Fellow, and is also a Fellow of the Royal Aeronautical Society and Royal Astronomical Society. He sits on a number of boards including the World Space Week Association, the Advisory Board of The SGAC, the Arts Catalyst and the Initiative for Interstellar Studies. He has PhD in Spacecraft Engineering an MSc in Experimental Space Physics and a BSc in Physics. He has published more than 90 papers in journals, book chapters and conferences.

65. Johann-Dietrich WOERNER (ESA)

Johann-Dietrich 'Jan' Woerner became the ESA Director General on 1 July 2015.

Previously, from March 2007 to June 2015, he served as Chairman of the Executive Board of the German Aerospace Center (DLR).

Jan Woerner was born in Kassel, Germany, in 1954. He studied civil engineering at the Technical University (TU) Berlin and TU Darmstadt, from where he graduated in 1985. In 1982, as part of his studies, he spent one year in Japan, investigating earthquake safety of nuclear power plants. Until 1990, Mr Woerner worked for consulting civil engineers Koenig und Heunisch.

In 1990 he returned to TU Darmstadt, where he was appointed as a professor of Civil Engineering and took over as Head of the Test and Research Institute. Before being elected as President of TU Darmstadt in 1995, he held the position of Dean of the newly established Civil Engineering Faculty. Jan Woerner headed the university from 1995 to 2007 and succeeded in making it the first autonomous university of the Federal Republic of Germany.

Jan Woerner has received honorary doctorates from New York State University at Buffalo (USA), technical universities of Bucharest (Romania) and Mongolia, the Saint Petersburg University for Economics and Finance (Russia) and École Centrale de Lyon (France). He has also been awarded the honours of Knight of the French Légion d'Honneur.

Jan Woerner was Vice President of the Helmholtz Association and also a member of various national and international supervisory bodies, advisory councils, committees and universities. Furthermore, he was appointed to the energy expert group of the German Government.

Before joining ESA as Director General, Jan Woerner was head of the German delegation to ESA from 2007 to 2015 and served as Chairman of the ESA Council from 2012 to 2014.

66. Danielle WOOD (National Aeronautics and Space Administration, United States of America)

Dr. Danielle Wood is a space systems engineer and researcher with expertise in technology policy for the US and emerging nations. She currently serves as the Special Assistant and Advisor to the Deputy Administrator at NASA Headquarters in Washington, DC. Previously, Dr. Wood held positions at the Aerospace Corporation, Johns Hopkins University, NASA's Goddard Space Flight Center and the United Nations Office of Outer Space Affairs. Dr. Wood studied at the Massachusetts Institute of Technology, where she earned a PhD in Systems Engineering, M.S. in Aerospace Engineering, M.S. in Technology Policy and B.S. in Aerospace Engineering.