

# Newsletter

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Exchange-Promotion-Development



Regional Centre for Space Science and Technology Education  
in Asia and the Pacific (China) (Affiliated to the United Nations)  
联合国附属空间科技教育亚太区域中心 (中国)



» The cover picture is selected from works of "Poster Design Contest for China Space Day 2018"

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## Congratulations on the Fiftieth Anniversary of the First United Nations Conference on the Exploration and Peaceful Uses of Outer Space

Since the beginning of the world, mankind began to imagine the mystery of outer space. However, the exploration of space remained at the stage of sitting on the earth until 1950s because of the restraint of gravity of the earth. A lot of well-known tales and stories during that time were widely spread such as "Kuafu chasing the sun", "Nvwa mending the sky", "Chang'e flying to the moon". Many professional instruments and facilities for astronomical observation were invented, like ecliptic armilla, equatorial armilla, quadrant, etc. On October 4, 1957, the first artificial satellite was launched, marking a new stage of space exploration. Human beings are realizing a better acknowledgement of space through a deeper understanding of the earth.

On December 13<sup>th</sup>, 1958, the United Nations General Assembly adopts its first resolution related to outer space, resolution 1348 (XIII) entitled "Question of the Peaceful Use of Outer Space". Ad Hoc Committee on the Peaceful Uses of Outer Space was established to promote space exploration and peaceful use. It was hoped that the Committee would enable space science and technology to promote sustainable economic and social development. For more than sixty (60) years, under the guidance of UNOOSA, countries have joined hands and explored together to build a peaceful, lawful and developmental space for the benefit of all mankind.

In June of this year, UNISPACE+50 was held at the United Nations Exhibition Hall in Vienna to commemorate the 50<sup>th</sup> anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space. This event was the highest level and largest aerospace event in the 21<sup>st</sup> century. At the UNISPACE+50 space exhibition, a total of forty-two (42) aerospace units from all over the world set up booths to showcase aerospace achievements. Alliance of Regional Centres (ARC) had its own booth showing images and distributing brochures so as to present the achievements of every Regional Centre in recent years and the development of the Alliance. The booth gained attention and appreciation from the State Members of UNOOSA and all the participants.

In the 21<sup>st</sup> century, application of space technology is in the ascendant. Strengthening international space science and technology cooperation, jointly exploring and utilizing space are the only ways and inevitable choices for achieving sustainable development of mankind. Despite the changes in the world, we believe that the application of universal space technology will benefit more people from all over the world in the next fifty (50) years.

Looking back at the road we walked, let's get ready and start our new journey. Congratulations on the 50<sup>th</sup> anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space!

## Special Focus

✧ Editor's note:

All this time, the Centre, based on "Programme on Space Applications", has been continuously expanding training topics to build its international education brand. Furthermore, the Centre contributes a lot in strengthening culture construction: holding activities like "Journey of Chinese Aerospace Technology and Culture", "Poster Design of China Space Day", which have become the highlights of the Centre and gained wide appreciation and recognition from participants and personage of various communities. This column concentrates on the educational development of the Centre, demonstrating highlight activities and showing stories of talent cultivation in space science and technology.

## Journey of Chinese Aerospace Technology and Culture

✧ The 5<sup>th</sup> Stop: China Aero Geophysical Survey & Remote Sensing Center for Land and Resources (AGRS)

On May 23<sup>rd</sup>, 2018, Journey of Chinese Aerospace Technology and Culture 2018 launched its 5<sup>th</sup> stop - China Aero Geophysical Survey & Remote Sensing Center for Land and Resources (AGRS).

Firstly, Dr. Liu Rongyuan gave a lecture on Imaging Spectrometry Technology and introduced the basic principles, the data processing methods, the applications in geography and environmental protection, as well as future opportunities and challenges. After that, Professor Ge Daqing gave an excellent lecture titled "Introduction into Satellite SAR Interferometry and Its Application", explaining the development of InSAR technology and its applications in geological survey, image analysis and commercial area. Then, Ms. Dong Lina, Senior Engineer of the Center, gave a demonstration of Land and Resource Satellite Application System through eight (8) parts, including task control, data collection, data processing, interpret charting, field survey, sharing&service, data support and operation management. She also showed the participants images and data taken by the resource satellite.

Following the instruction of the staff, the participants experienced the simulated satellite launch with VR glasses. All participants listened the lectures carefully and fully participated in the experiencing activity. They also raised a lot of questions about the remote sensing satellite technology and the product service, and received patient answers and explanations from staff of the Centre. The participants all said that, the visit was very enriching for them and helped them know more about the new technology and application in remote sensing, which would benefit their future study and professional development. They also spoke highly of China's satellite and remote sensing technology, and hoped China could have further cooperation with their home countries.



### ❖ The 6<sup>th</sup> Stop: The Twenty First Century Aerospace Technology Co., Ltd. (21AT)

On May 31<sup>st</sup>, the Centre organized the 6<sup>th</sup> technical visit to the Twenty First Century Aerospace Technology Co., Ltd. (21AT).

We, participants of 2017 MASTA & DOCSTA program, had the great opportunity to visit this company as a part of our technical visit on May 31<sup>st</sup>, 2018. Upon our arrival, Mr. He Jianjun gave the welcoming speech. Then, Ms. Zhang Nannan gave us a brief introduction of the company. After that, we went to the data and system demonstration office to see their activities.

In brief introduction parts, Ms. Zhang Nannan discussed about the basic information of the company, Beijing Series Satellites and Products and Services. She also described about the ground stations of Triplesat the company had, such as the ones in UK, in Singapore and Beijing HQ. She also described about Imagery comparison between TripleSat constellation and Spot. She told us how to collect data and Interpretation processing systems. Additionally, she talked about online service portal systems of TripleSat constellation and how we could get this imagery and payment systems.



In my opinion, technical visit is very important for the students, because it offers the practical experience of observing the new technology, applications and developed world. Through this visit, I learned some new technology and utilization which would certainly become an advantage for my upcoming days.



## Graduation

### ❖ Graduation Ceremony & Course Completion Ceremony for 2016 & 2017 MASTA Participants

On June 29<sup>th</sup>, 2018, Graduation Ceremony and Course Completion Ceremony for 2016 & 2017 MASTA was held in the conference center of New Main Building, Beihang University. Mr. Li Yue, Deputy Director of Department of Military-Civil Technology Integration, Ministry of Industry and Information Technology (MIIT), Ms. Wu Xiaomei, Secretary General of International Alliance of Satellite Application Service (ASAS), Mr. Mohammad Ebrahimi, Director General of Department of Education and Training and Database Management of APSCO, representatives of RCSSTEAP attended the ceremony. Twenty-eight (28) master candidates who will graduate in June, 2018 and thirty-six (36) master candidates who completed their course and entered into thesis writing period attended the ceremony. The ceremony was hosted by Mr. Weng Jingnong, Executive Director of the Centre and Dean of International School, Beihang University.

Prof. He Linshu, senior experts of the Centre and Mr. Mohammad Ebrahimi, Director General of Department of Education and Training and Database Management of APSCO, issued the certificates to the graduates. Mr. Li Yue, Deputy Director of Department of Military-Civil Technology Integration, MIIT, issued the certificates to "Excellent Graduate". Ms. Wu Xiaomei, Secretary General of ASAS, and Ms. Byambasuren Erdenee, Senior Official of Department of Strategic Plan and Program Management of APSCO, issued the certificates to the participants who completed the courses.



At the ceremony, Mr. Weng Jingnong, Executive Director of the Centre and Dean of International School, Beihang University, Mr. Mohammad Ebrahimi, Director General of Department of Education and Training and Database Management of APSCO, Mr. Jin Tian, Associate Professor of School of Electronics and Information Engineering, Beihang University and teacher representatives of the Centre, delivered speeches respectively. While congratulating on graduation, they extended best wishes to participants and hoped they could bear the good qualities, as the motto "Down to Earth while Aiming High" goes.

Mr. BELABID NASREDDINE, Algerian, Excellent Graduate of 2016 MASTA participant, and Mr. CONDORI MENDOZA MARCELO FERNANDO, Bolivian, monitor of 2017 RS&GIS field delivered speeches on behalf of 2017 graduates and 2016 MASTA students respectively. They expressed their sincere thanks to Beihang University and the Centre for offering them good learning environment and experienced teachers, which would have great impact on their future development.

MASTA/DOCSTA Program was established in 2006 at Beihang University. This program get substantial support from China Scholarship Committee, and most students of the program get full scholarship of "Chinese Government Scholarship". Based on this program, APSCO Education and Training Centre in China and Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (Affiliated to the United Nations) were set up respectively at Beihang University in 2013 and 2014. This program is a well-designed one with the support of Chinese Government focusing on promoting peaceful use of space technology. Along with the establishment of RCSSTEAP (China), this program has become one of the famous brands of Beihang University. Until now, Beihang University has cultivated more than one thousand (1000) talents in space technology application through degree programs and short training programs. Most of the graduates are playing important roles in aerospace industry in their countries.

In 2018, the Centre plans to enroll participants in four (4) educational fields, including RS&GIS, GNSS, Micro-satellite Technology, Space Laws and Policy for MASTA Program. Currently, the enrollment has entered the final stage. The new participants will register in early September this year.



## ✧ The 1<sup>st</sup> Graduation Reception



Since its establishment in 2014, the Centre has cultivated about one hundred (100) master's students and PhD students for more than twenty (20) developing countries. In order to strengthen the relationship with graduates and offer them with better opportunities to learn about space technology application and service industry in China to promote further cooperation and communication in the future, in the night of June 29<sup>th</sup>, 2018, the Centre, with International Alliance of Satellite Application Service, jointly held the 1<sup>st</sup> Graduation Reception for MASTA/DOCSTA Program. Representatives from more than ten (10) enterprises in aerospace industry, such as International Alliance of Satellite Application Service (ASAS), China Low-carbon Urban Strategy Institute, Institute of Remote Sensing and Digital Earth of CAS, Industry Alliance for Remote Sensing Applications(CARSA), APSTAR(Beijing), Space View Technology Co., Ltd., Open Cosmos Ltd., China Space Economic Forum, China Aerospace Science and Technology Corporation, attended the reception. The reception was hosted by Mr. Weng Jingnong, Executive Director of the Centre, Dean of International School, Beihang University.

Ms. Wu Xiaomei, Secretary General of International Alliance of Satellite Application service, extended congratulation to all graduates and hoped them to use what they learnt in China for the benefit of their own countries. At the reception, ASAS built up relationship with participants to promote international cooperation in space technology. In addition, ASAS awarded "Local Liaison Officer of ASAS" to ten (10) participants.

Ms. Liu Yanghua, Technical Director of PIESAT Information Technology Co., Ltd. delivered a speech at the reception, on behalf of all enterprise representatives. She introduced the overall situation, products and application of the company, and hoped to work with participants of the Centre in space technology field.

Mr. Weng Jingnong, Executive Director of the Centre and Dean of International School, Beihang University, thanked ASAS and other aerospace enterprises for their great support to the Centre, and hoped all graduates could cherish their study experience in China and become the ambassadors between China and their home countries to promote cooperation in space technology applications.

The reception was successfully held with the support of ASAS and other more than ten (10) aerospace enterprises and institutions. The reception received high praise from graduates, which would have great impacts on exploring international talent cultivation, promoting alumni contact, strengthening industrial cooperation and expanding international cooperation in space technology development.



❖ Wonderful Moment

❖ Editor's Note:

This is a time of youth embracing a bloom of dream. The wonderful moment in Beihang will be a cherishable experience for them on the new long journey. experience for them on the new long journey.



## RCSSTEAP Meetings

### ✧ Editor's note:

In order to follow the development of the space science and technology closely, and to promote the improvement of the Centre, representatives of the Centre participate in the conference of the Committee on the Peaceful Uses of Outer Space (COPUOS) actively, promote the establishment of Alliance of Regional Centres (ARC), and provide suggestions on peaceful use of outer space. Meanwhile, the Centre tries to offer the participants more opportunities to attend international conferences on Space Technology, speak up on the international stage to open up their horizon, which will help to expand the influence of the Centre in return.

### ✧ Representatives of the Centre Attended the 61<sup>st</sup> Session of the United Nations Committee on the Peaceful Uses of Outer Space and UNISPACE+50

From June 17<sup>th</sup> to 26<sup>th</sup>, 2018, Mr. Weng Jingnong, Executive Director of the Centre and Dean of the International School, attended the 61<sup>st</sup> session of the United Nations Committee on the Peaceful Uses of Outer Space and participated in the organization of the UNISPACE+50 aerospace exhibition.

From June 18<sup>th</sup> to 23<sup>rd</sup>, 2018, UNISPACE+50 (in order to memorize the 50<sup>th</sup> anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space) was held in Vienna. This was the aerospace activity of the highest-level and the largest scale so far in the 21<sup>st</sup> century, which included UNISPACE+50 symposium, UNISPACE+50 high-level segment and UNISPACE+50 aerospace exhibition. At the exhibition, in total of forty-two (42) units in space industry from different countries set up their booths. Alliance of Regional Centres (ARC) had its own booth showing images and distributing brochures so as to present the achievements of every Regional Centre in recent years and the development of the Alliance. The booth gained attention and appreciation from State Members of United Nations Office for Outer Space Affairs (UNOOSA) and all the participants.

On June 22<sup>nd</sup>, UNOOSA organized Meeting of the Directors of the Regional Centres for Space Science and Technology Education (affiliated to the United Nations) to discuss the development in the future. Mr. Luc St-Pierre and Mr. Shirish Ravan from UNOOSA, Mr. Ganiy I. Agbaje, Director of ARCSSTE-E, Mr. Anas Emran, Director of CRASTE-LF (Morocco), Mr. Awni Khasawneh, Director of RCSSTEWA, Weng Jingnong, Executive Director of RCSSTEAP and Jiang Hui from CNSA attended the meeting. Mr. Senthil Kumar, Director of CSSTEAP, participated in the conference through Skype. The meeting was chaired by Mr. Luc St-Pierre.



At the meeting, Mr. Luc St-Pierre and Mr. Shirish Ravan expressed their thanks to the Centre for their excellent work on behalf of UNOOSA and looked forward to more contribution of Alliance of Regional Centres (ARC). The Directors of the Regional Centres made short statements on the status of their Regional Centres and expressed their expectation of making more contribution to space education by the bond of ARC. They would like to make further cooperation, starting from sharing resources, jointly holding short training programs and updating educational curricula. Mr. Weng Jingnong pointed out that, the application of space technology was at a new stage of development, all Regional Centres were facing new opportunities and challenges. It was hoped that, with the support of UNOOSA, the Regional Centres would take the Alliance as the link to promote the smooth development of cooperation in a constructive and pragmatic manner, making more contribution to the education of space application talents. At the meeting, it was agreed that Mr. Ganiy I. Agbaje, Director of ARCSSTE-E, would deliver a speech on behalf of ARC on 27<sup>th</sup> at the Conference, introducing the progress of ARC and the Centres as well as elaborating on "Programme on Space Applications" with some thinking and suggestions on the development of the Alliance.

### ❖ Participant Representatives of the Centre Were Invited to Attend the 5<sup>th</sup> China International Satellite Service Business Matching

On June 15<sup>th</sup>, the 5<sup>th</sup> China International Satellite Service Business Matching was held at China National Conference Center in Beijing. The conference was co-organized by International Alliance of Satellite Application Service (ASAS), China Association of Remote Sensing Application (CARSA), and GNSS and LBS Association of China. Nearly three hundred (300) representatives from twelve (12) countries were in presence. Twenty (20) participant representatives of the Centre were also invited to attend the conference, among whom three (3) participants, from Venezuela, Nigeria and Bangladesh, made keynote speeches during the conference.

In the theme of "Connecting countries along the 'Belt and Road', realizing China's satellite service globally", the conference consisted of three (3) parts: aerospace keynote speeches, commercial information exchange, and space talks. All conference attendees discussed lively on the topics of satellite application, trade talks and global services, sharing experiences and exploring the ways to develop together.

During the keynote speech - user cases sharing and demand docking, three (3) participants of the Centre, BUR-GUILLOS FAJARDO CARLOS ALBERTO from Venezuela, AHMED WASIU AKANDE from Nigeria and SM SUJAUDDIN PATHAN SHIBLEE from Bangladesh made related reports. They explained in details their understanding of Chinese satellite application service, as well as the development and actual needs in space technology application in their own country. The discussion was heated and the reports were highly appreciated by the participants.



International Alliance of Satellite Application Service (ASAS) is an open, non-governmental, non-profit, cross-industrial institute which is formed voluntarily by outstanding enterprises, scientific research institutions, schools and individuals. ASAS works independently under the guidance of China High-tech Industrialization Association (CHIA). Aiming at promoting China's global satellite service, ASAS has set the following goals: establish a platform for international cooperation, communication and trading based on the construction of the Belt and Road Initiative and the trend of the international market; provide service and information to domestic enterprises for their overseas development and rights & interests; assist affiliates and partners to undertake overseas satellite service projects; promote the overseas construction of satellite ground facilities and the operations of satellite service business through joint efforts; bring in advanced technologies, products and operating experience from abroad to bring value and cooperation opportunities for affiliates, partners and customers.

As one of the cooperation partners of the Centre, the ASAS has held several Satellite Application short training programs jointly with the Centre, which has profited a large number of participants and helped to increase the influence of China's space science achievements in the world stage.



### ❖ Beihang International Student Team Won Award in the International Collegiate Spacecraft Innovation Design Contest 2018

From August 10<sup>th</sup> to 13<sup>rd</sup>, 2018, the International Collegiate Spacecraft Innovation Design Contest (ICSIDC) 2018 was held at Harbin Institute of Technology (HIT), Heilongjiang Province, China. Forty-seven (47) student teams qualified for the final contest and defended their project in front of a committee composed by international famous professors from top universities.

The objective of the Innovative Design Contest was to encourage innovations in spacecraft related fields around the cutting edge technology progress and the development of aerospace in the future. Participants were particularly encouraged to propose bold visions of innovative concepts that may have great influences.



After fierce competition with the other student teams, "Monitoring Air Pollution and Detecting Renewable Energy Areas among the Belt and Road countries with a CubeSat", proposed by the Beihang international student team (Members: Vahid RASTINASAB, Fatih AVCI, Kamel KERROUCHE, Maria GUARIRAPA, Faiza AREZKI) and supervised by Prof. Wang Xinsheng, Beihang team finally won the second prize in ICSIDC2018.

ICSIDC2018 was hosted by Chinese Society of Astronautics (CSA), Association of Sino-Russian Technical Universities (ASRTU), Harbin Institute of Technology (HIT) and Bauman Moscow State Technical University, and organized by Harbin Institute of Technology and Shanghai Aerospace Control Technology Institute.



## Education and Training Programs

### ✧ Editor's note:

Educational training is the core of the Centre's work, which includes degree programs and short training programs. In 2018, the Centre have four educational fields available for postgraduates: Remote Sensing and Geographic Information System (RS&GIS), Global Navigation and Satellite System (GNSS), Micro-satellite Technology, Space Law and Policy. The admission has been successfully completed.

In order to share the resources, promote the efficiency, and enjoy a win-win cooperation, the Centre, with its partners and other Regional Centres holds jointly the short training programs and science education for young people. Meanwhile, the Centre expands the training oversea by initiating the short training and exchanges to explore new education cooperation.

### ✧ Team Pilot Project Conclusion Defense

In the spring semester of 2018, thirty-eight (38) participants of 2017 MASTA Program majoring in GNSS, RS&GIS, and Micro-satellite Technology were engaged in Team Pilot Project (TP). After three months of professional practice from March to May, the participants completed their project conclusion defense in May. All the teams submitted their final reports and displayed the posters they made for the project conclusion.



### ✧ Thesis Defense



In June 2018, twenty-eight (28) MASTA Program participants majoring in GNSS, RS&GIS, Space Law and Policy completed and passed their thesis defense and degree review. All of them acquired the Degree of Master of Engineering in Space Technology Applications. Two (2) student applied for extension of graduation due to the failure to meet graduation requirements.



### ✧ Thesis Proposal

In June 2018, thirty-six (36) participants of 2017 MASTA Program majoring in GNSS, RS&GIS, Micro-satellite Technology successfully completed their thesis proposal defense at the Centre. A panel of supervisors reviewed the literature reviews and thesis proposals submitted by the participants, and gave guiding opinions accordingly. Most of the participants' research topics are closely related to the requirements of space technology applications in their home countries. Participants of 2017 MASTA Program are expected to graduate in June 2019. Some participants have been warned and dropped out of the University due to the failure to meet graduation requirements.



### ✧ Enrollment of MASTA Program & DOCSTA Program 2018

In 2018, the Centre enrolled MASTA Program and DOCSTA Program participants majoring in four (4) academic fields including GNSS, RS&GIS, Micro-satellite Technology, Space Law and Policy. After stringent review of application materials and online interviews, the enrollment has been completed successfully. A total of fifty-six (56) candidates were enrolled, including forty-five (45) master's candidates and eleven (11) doctoral candidates. These participants are expected to complete registration in September this year.



## ❖ The 2<sup>nd</sup> APSCO-SSS Summer Camp Was Held in Ankara, Turkey



From July 30<sup>th</sup> to August 17<sup>th</sup>, 2018, the 2<sup>nd</sup> Summer Camp of APSCO Small Student Satellite (SSS) Project was held successfully in Ankara, Turkey. The summer camp was hosted by Asia-Pacific Space Cooperation Organization (APSCO) and was organized by Middle East Technical University in Turkey (METU).

More than sixty (60) participants from eight (8) APSCO member states, including Bangladesh, China, Iran, Mongolia, Pakistan, Peru, Thailand and Turkey, attended the opening ceremony. Dr. Mohammad Ebrahimi Seyedabadi, Director General of Department of Education and Training and Database Management of APSCO, Prof. Huang Haijun, Vice President of Beihang University and Prof. Ozan Tekinalp from Middle East Technical University made welcome speeches at the opening ceremony respectively.

Based on the successful experience of the 1<sup>st</sup> summer camp of APSCO-SSS project held in Beihang University last year, the scopes of 2<sup>nd</sup> summer school include the miniature spacecraft system design, subsystem design, miniature spacecraft engineering practice, innovation team project practice and assessment, technical visiting, etc. The summer camp not only pushed forward the APSCO-SSS project phase work, but also contributed to the capacity-building in basic space technology and multicultural exchange among APSCO member states.



In December 2016, Asia-Pacific Space Cooperation Organization (APSCO) kick-offed the Student Small Satellite (APSCO-SSS) Project, which aimed to provide a basic space technology education and engineering training platform for young students, young engineers and faculties from APSCO member states. With the hand-on practice on the miniature spacecraft project, the participants from APSCO member states or "Belt & Road" countries can benefit from the basic space technology education, spacecraft research and development, satellite technology application.



Beihang University, as the leading university of the APSCO-SSS project, successfully organized the 1<sup>st</sup> summer camp from August 14<sup>th</sup> to September 2<sup>nd</sup>, 2017, based on the sufficient resources of Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (Affiliated to the United Nations) (RCSSTEAP).

## Cooperation and Exchanges

### ❖ Editor's note:

In order to expand its influence and promote long-term sustainable development, the Centre actively develops exchanges and cooperation with other countries and seeks new partners. In July 2018, representatives of Earth Observation System and Data Centre, CNSA visited the Centre. They hoped to cooperate with the Centre and carry out special talent training in order to realize mutual benefit and common development with the "Belt and Road" countries. In August, representatives of Harbin Institute of Technology (HIT) Press came to the Centre for research and exchanged ideas in sharing resources and education services. In addition, the Centre and International Teenager Competition and Communication Center (ITCCC) have reached initial cooperation intention for the promotion of youth space science and technology education.

### ❖ Representatives of International Teenager Competition and Communication Center Visited the Centre

On June 1<sup>st</sup>, 2018, Ms. Wang Xiaoli and Dr. Mao Yong from the International Teenager Competition and Communication Center (ITCCC) visited the Centre and communicated with the participants.

Firstly, Ms. Wang Xiaoli and Dr. Mao Yong introduced basic information of the organization, international competitions they managed and its future development, and they highly welcomed the participants from the Centre to join them as volunteers, judges or regional liaisons. The participants, with great interest in activities held by ITCCC, had a lively discussion with the two teachers. They also showed their willingness to participate in related practical activities in order to enrich their experience in the aerospace knowledge popularization.

This was the first interaction between the participants of the Centre and ITCCC, which serves as a solid foundation for further cooperation.



### ※ Representatives of Earth Observation System and Data Center, CNSA Visited the Centre

On July 19<sup>th</sup>, 2018, Mr. Zhu Dangdang, Mr. Lai Jibao and Ms. Meng Tao of Earth Observation System and Data Center, CNSA, visited the Centre. Mr. Weng Jingnong, Executive Director of the Centre, Mr. Gao Guozhu, Expert of Space Law and Policy, Mr. Wang Xinsheng, Expert of Micro-satellite Technology, Ms. Wang Xin, Brand Director, warmly received the guests.

Mr. Zhu Dangdang briefly introduced the latest progress of the "Belt and Road Initiative" spatial information corridor, the four (4) major supporting platforms of the project, the layout of domestic local pivot, the selection of foreign nodes, the partnership plan, the development model and ideas. It was pointed out that education and training was one of the important basic platforms of the project. It was hoped that special personnel training would be carried out in cooperation with the Centre, focusing on special talent training in the Belt and Road countries. On behalf of the Centre, Mr. Weng Jingnong extended a warm welcome to the representatives from CNSA. He briefly introduced the general situation of the development history, personnel training characteristics, curriculum construction and international cooperation of the Centre, and expressed his full support for the construction of the "Belt and Road Initiative" spatial information corridor.

Then, the representatives visited the computer lab, distance education and video conference room, RS&GIS lab, STA library, publication show window, participant archive shelves, etc.



### ※ Representatives of Harbin Institute of Technology Press Came to the Centre for Research



On August 7<sup>th</sup>, 2018, Ms. Zhang Yaru, Director of Harbin Institute of Technology (HIT) Press, came to the Centre for research. Mr. Weng Jingnong, Executive Director of the Centre, warmly welcomed the guests.

On behalf of the Centre, Mr. Weng Jingnong warmly welcomed the visit of Ms. Zhang Yaru, and introduced the development of the Centre in terms of personnel training, capacity building, international cooperation, etc. Ms. Zhang Yaru briefed HIT Press on the network education platform and the space innovation knowledge service center. The two sides had extensive exchanges and discussions on space science popularization education, publication of space technology application textbooks and sharing of network education.



Subsequently, they visited the computer lab, distance education and video conference room, RS&GIS lab, STA library, publication show window, participant archive shelves, etc.

# Multicultural Integration

## ✧ Editor's note:

People of the world are families. The Centre has enrolled nearly two hundred (200) students from eighteen (18) countries in "Space Technology Applications" program since it was founded in 2014. Participants from all over the world gathered, sharing their cultures, promoting civilization development, and writing a movement of multiculturalism.

## ✧ Story about the Centre

Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (Affiliated to the United Nations) (RCSSTEAP), established on November 17<sup>th</sup>, 2014, has been taking "Promoting the peaceful use of space technologies for the benefit of all humankind" as its honorable mission, continuously exploring and forging ahead with innovative development. On the occasion of the 50<sup>th</sup> anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50), this commemorative album, recording the development course of the Centre with thirty-four (34) pictures, is published to tell the story of the Centre to the world.



### 01 Introduction 中心简介

**联合国附属空间科学与技术教育亚太区域中心(中国)** (简称中心)于2014年11月17日正式成立。总部设立在中国北京航空航天大学主校区内。

中心作为联合国太空事务委员会支持的教育培训实体，旨在通过能力建设、经验交流、远程培训等形式，为外空领域“空间应用方案”的实施做出贡献。为提升中心成员国空间科技教育水平，中心在成员国间开展合作，为成员国提供空间科技教育、培训、学术交流和访问机会。

中心主要教育领域包括：空间信息、空间法律与政策、空间导航卫星系统、卫星通信、全球导航卫星系统(GNSS)、微卫星技术、空间法与政策等。

中心与工业界建立了广泛的合作关系，可为学员提供多种形式的实习和就业机会。

中心将秉承“促进太空技术的和平利用，造福全人类”的宗旨，不断探索和创新，为国际空间教育平台，积极推动空间技术和和平利用，造福人类。

中心目前的成员国包括：阿尔及利亚、阿根廷、孟加拉国、玻利维亚、巴西、中国、印度尼西亚、巴基斯坦、秘鲁、委内瑞拉。

**Regional Centre for Space Science and Technology Education in Asia and the Pacific (China)** (affiliated to the United Nations) (RCSSTEAP for short) was established on November 17, 2014. The Centre is located on the main campus of Beihang University, Beijing, China.

The Centre, as an education and training entity supported by the Committee on the Peaceful Uses of Outer Space (COPUOS), was established with the missions to promote the peaceful use of space technologies for the benefit of humanity and to sensitize the countries within the region about space science and technology activities by educating and creating awareness through training, workshops, short courses and webinars. It seeks to contribute to the implementation of "Programme on Space Applications" promoted by COPUOS and to the enhancement of the education and training level as well as application capacity of space science and technology in the Member States of the Centre through capacity building, information communication, training programmes and professional visits.

For the purpose of facilitating the UN Space Applications Programme and demands of the Asia-Pacific countries regarding space science and technology education, the Centre offers degree and non-degree programmes with academic exchanges and consultation carrying out in the field of space technology applications.

The main education and training fields of the Centre include Remote Sensing and Geographic Information Systems (RS&GIS), Satellite Communications, Global Navigation Satellite System (GNSS), Micro-satellite Technology, Space Law and Policy, etc.

The Centre has established extensive cooperation with space industries. A variety of internships and hands-on opportunities are provided to the participants.

The Centre has internationally qualified academic and administrative staff with excellent facilities for education, accommodation and recreation.

Presently, the Centre has ten (10) Member States including Algeria, Argentina, Bangladesh, Bolivia, Brazil, China, Indonesia, Pakistan, Peru and Venezuela.



### 03 Governing Board

The Centre is an education and training entity supported by the United Nations Office for Outer Space Affairs (UNOOSA). Based on the multidisciplinary advantages and international academic experience of Beihang University, the Centre aims at building an open, innovative and international institution of Space Science and Technology Education with integrating and maximizing advanced educational resources at home and abroad. It seeks to promote the peaceful use of space technologies for the benefit of humankind.

作为联合国太空事务委员会支持的教育培训实体，中心依托北京航大的学科优势和国际教育基础，整合世界优秀教育资源，致力于打造一个开放、创新、国际化的空间教育平台，积极推动空间技术和和平利用，造福人类。

**10个成员国:**

Algeria, Argentina, Bangladesh, Bolivia, Brazil, China, Indonesia, Pakistan, Peru, Venezuela

### 04 About RCSSTEAP 关于我们

Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (Affiliated to the United Nations) 联合国附属空间科技教育亚太区域中心(中国)

2013.2 Application Making a proposal at the 50<sup>th</sup> session of Scientific and Technical Subcommittee of UN COPUOS

2013.6 Approved by the Subcommittee of COPUOS at the 50<sup>th</sup> session of COPUOS

2013.9 Peaceful Evaluation Mission by UNOOSA Expert Group (Experts from Greece, India, Iran, Japan, Mexico, Pakistan)

2014.3 Approved by the State Council of China

2014.6 Attending the Director Meeting of UN-Regional Centres as an observer

2014.7 Organizing a training course for Morocco (CRASTE-LF)

2014.11 Organizing International Space Education Forum at the 50<sup>th</sup> International Astronautical Congress (IAC), Toronto

2014.10 Signing agreements with contracting parties

2014.11 The Inauguration Ceremony The 1<sup>st</sup> Meeting of the Governing Board

With more than ten years preparation, RCSSTEAP was established on November 17, 2014. Presently, the Centre has 10 Member States. The Centre adheres to "Promoting the peaceful use of space technologies for the benefit of all humankind" as its mission.

### 05 Organization 组织架构

Ministry of Industry and Information Technology of the People's Republic of China (MIIT) 工业和信息化部/中国信息通信研究院

Operational and Logistical Support Department 运营与保障部

Global Navigation Satellite System 全球卫星导航系统

Remote Sensing and Geographic Information Systems 遥感与地理信息系统

Satellite Communication 卫星通信

Micro-satellite Technology 微卫星技术

Space Law and policy 空间法律与政策

Admission and Students' Affairs Department 招生与学员部

Cooperation and Legal Affairs Department 对外合作与法律部

United Nations Office for Outer Space Affairs (UNOOSA) 联合国太空事务委员会

联合国附属空间科学与技术教育亚太区域中心(中国) RCSSTEAP

Governing Board 理事会

Advisory Committee 咨询委员会

### 06 Governing Board of RCSSTEAP 中心理事会

Name List of the Governing Board Members

Yong Shengqun, Administrator of China National Space Administration (CNSA)

LAKSHMI MISHRA, Director of International Cooperation of Algeria Space Agency (ASA)

Felix MONTAUDO, Secretary General of Argentina National Commission of Space Activities

Zaid Hasan Ali, Chairman of Bangladesh Space Research and Remote Sensing Organization

Walter Ayala Urbina, Senior Regional Engineer of Bolivia Space Agency (ASB)

Jose Rodriguez Perez-Cerdas, President of Brazilian Space Agency (CBR)

Thomas Dornheuer, Head of National Institute of Aerospace and Space (INPE)

Imad Abdel-Hamid, Member of Egyptian Space and Upper Atmosphere Research

Shah Sultan Khan, Representative of Federal Commission on Aerospace Research and Development (FCARD) of the Republic of Peru

Shah Sultan Khan, Representative of Federal Commission on Aerospace Research and Development (FCARD) of the Republic of Peru

Arshad Ganiyar Taimov, President of Pakistan Agency for Space Activities (PASA)

Name List of the Representatives of Observers

Yoshinori Inoue, Director of the United Nations Office for Outer Space Affairs (UNOOSA)

Yi-Hsin, Secretary General of Asia-Pacific Space Cooperation Organization (APSCO)

Director of the Advisory Committee

Yu Huijun, President of Beihang University

The 1<sup>st</sup> GB Meeting, Nov. 17, 2014

The 1<sup>st</sup> Advisory Committee Meeting, Oct. 6, 2014

The 2<sup>nd</sup> GB Meeting, Nov. 29, 2015

The 2<sup>nd</sup> Advisory Committee Meeting, Nov. 29, 2015

Historical Moments

### 07 Professors/Experts 部分师资

Ms. Mazlan Othman, Former Director of UNOOSA  
 Mr. Sergio Camacho, Former Director of UNOOSA  
 Mr. Niklas Hedström, Doctor UNOOSA  
 Mr. Shauk Rawan, UN-SPIDER Beijing Office  
 Mr. Christophe Mouton, Educ., France  
 Mr. Gertvinner, Professor, U.S.A.  
 Mr. Maarten Op de Fosse, Ohio University, U.S.A.  
 Mr. Christian, Hebei University of Cologne, Germany

### 08 Professors/Experts 部分师资

Mr. Yang Yueshi, Academician of Chinese Academy of Sciences  
 Mr. Han Chunhui, Beijing Satellite Navigation Centre  
 Mr. Jing Guifei, Deputy Director of NSROCC  
 Mr. Wang Jianxin, China Resource Geomatics Co., Ltd.  
 Mr. Zhuang Fengyan, Beihang University  
 Mr. He Linshu, Beihang University  
 Mr. Yang Dongjun, Beihang University  
 Mr. Wang Jingrong, Beihang University  
 Mr. Wu Fupai, Beihang University  
 Mr. Jin Tian, Beihang University  
 Ms. Li Bing, National Disaster Reduction Center  
 Mr. Zhao Tian, Hongkong University

### 13 Living Facilities 生活设施

The Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (Affiliated to the United Nations) is located on the main campus of Beihang University. The campus is picturesque and historical with a large area of over 1,500,000 square metres, where the Green Garden, the Lake Park, the South Lake as well as Cherry Blossom Garden are scattered and built sports facilities as gym and stadium are built. The Centre campus is characterized by four pavilions (School History Museum, Scientific and Technological Innovation Museum, Air and Space Museum, Art Gallery) and Musical Hall.

### 14 Graduation Ceremonies 毕业典礼

MASTA 2012  
 MASTA 2013  
 DOCSTA 2013  
 MASTA 2014  
 DOCSTA 2013  
 MASTA 2015

### 09 硬件设施 Educational Facilities

As a first institution of the APSCO Education Training Centre (China), Beidou International Exchange and Training Centre and RCS/STEP, Beihang University is having very close cooperation relationship with the partners relevant universities, research institutions and enterprises at home and abroad.

Thirty subjects of Beihang University will provide the Centre with plentiful teaching and scientific resources for space science and technology education. In the past few years, a great many laboratories were founded, such as the Control Station for Remote Sensing Satellite Data Processing, RS&GIS Laboratory, Beidou Satellite Navigation System Exhibition Hall, Microsatellite Technology Laboratory and Distance Education & Video Conference Laboratory.

### 10 Affiliated to the United Nations

Mr. Sergio Camacho, Ms. Mazlan Othman and Ms. Simonetta Di Pippo once visited Beihang University during their time in office and all spoke highly of Beihang University. A cooperative agreement was signed with the United Nations which stated that the United Nations would cooperate with the Centre by providing expert advice, educational curricula, technical support, necessary documentation and other appropriate support.

Mr. Sergio Camacho, Former Director of UNOOSA  
 Ms. Mazlan Othman, Former Director of UNOOSA  
 Ms. Simonetta Di Pippo, Term of office: 2015-Present, Director of UNOOSA

Historic Moments in the Process of Application

### 15 Professional / Technical Visits 专业参观

### 16 Short Training Programmes 短期培训项目

Short training programmes are jointly organized by the Centre, UN-SPIDER, APSCO on the principle of resource sharing, efficiency promotion and with win-win cooperation.

### 11 Programmes 教育培训

- 全球卫星导航系统 (GNSS)
- 遥感与地理信息系统 (RS&GIS)
- 卫星通信 (SATCOM)
- 小卫星技术 (Micro-satellite Technology)
- 空间法律与政策 (Space Law and Policy)

硕士/博士 研究生项目 (Master's/Doctoral Programmes)  
 远程教育 (Distance Education)  
 学历项目 (Degree Programmes)  
 非学历项目 (Non-Degree Programmes)  
 交流与访问 (Exchange and Visitation)  
 暑期学校 (Summer School)

### 12 Partners 合作伙伴

● 中心以“开放、包容、共赢”为理念，不断扩充合作，创新发展。  
 The Centre, sticking to the vision of "Openness, Innovation, and Inclusiveness", is continuously expanding cooperation with innovative development.

### 17 Extracurricular Activities 课外活动

### 18 Extracurricular Activities 课外活动



31 Degree Programmes and Short Training Programmes 2017  
2017年教育与培训项目

Degree Programmes in 2017			2017年教育与培训项目				
Master's Programmes			硕士研究生项目				
Research Direction	Number	Countries of Participants	专业方向	人数	生源国		
Global Navigation Satellite System (GNSS)	11	Bangladesh, Bolivia, Mongolia, Pakistan, Peru, Thailand, Turkey	全球卫星导航系统	11	孟加拉、玻利维亚、蒙古、巴基斯坦、泰国、土耳其		
Remote Sensing and Geographic Information Systems (RS/GIS)	14	Bahia, Bangladesh, Brazil, Iran, Mongolia, Nigeria, Pakistan, Peru, Turkey	遥感与地理信息系统	14	巴西、孟加拉、伊朗、蒙古、尼日利亚、巴基斯坦、秘鲁、土耳其		
Micro-satellite Technology	15	Mongolia, Peru, Pakistan, Bangladesh, Brazil, Turkey, Venezuela, Iran, Thailand	微小卫星技术	15	孟加拉、巴西、伊朗、蒙古、巴基斯坦、秘鲁、泰国、土耳其、委内瑞拉		
Doctoral Programmes			博士研究生项目				
Research Direction	Number	Countries of Participants	专业方向	人数	生源国		
Space Technology Applications	11	Algeria, Bangladesh, Iran, Turkey, Thailand, Pakistan, Venezuela	空间技术应用	11	阿尔及利亚、孟加拉、伊朗、泰国、巴基斯坦、土耳其、委内瑞拉		
Short Training Programmes in 2017			短期培训项目				
Date	Topic	Number	Countries of Participants	日期	培训专题	人数	生源国
Feb. 22-24	Radio Satellite Navigation Technology	51	Algeria, Egypt, Kenya	2月22-24日	北斗卫星导航系统	51	阿尔及利亚、埃及、肯尼亚
May 9-11	Remote Sensing Technology and Application	40	Belgium, France, Germany, Italy, Luxembourg, Netherlands	5月9-11日	遥感技术应用	40	比利时、法国、德国、意大利、卢森堡、荷兰
Aug. 14-18	The New Development of the GNSS Technology	47	Bangladesh, China, Iran, Mongolia, Pakistan, Peru, Thailand, Turkey	8月14-18日	GNSS技术新发展	47	孟加拉、中国、伊朗、蒙古、巴基斯坦、秘鲁、泰国、土耳其
Oct. 20-31	Integration of Multisensor Earth Observation Data for Remote Sensing Application	46	Bangladesh, China, Fiji, Ghana, India, Indonesia, Iran, Kenya, Mongolia, Mozambique, Nigeria, Algeria, Pakistan, Peru, Turkey, Thailand, Turkey	10月20-31日	多源遥感数据融合应用	46	孟加拉、中国、斐济、加纳、印度、印度尼西亚、伊朗、肯尼亚、蒙古、莫桑比克、尼日利亚、阿尔及利亚、巴基斯坦、秘鲁、泰国、土耳其、泰国、土耳其
Nov. 17-19	China Satellite Service and Data Analysis & Application in Remote Sensing	51	Algeria, Bangladesh, Bolivia, Brazil, China (Hong Kong), Iran, Malaysia, Mongolia, Nigeria, Pakistan, Peru, Thailand, Turkey, Venezuela	11月17-19日	北斗卫星服务应用	51	阿尔及利亚、孟加拉、玻利维亚、巴西、中国(香港)、伊朗、马来西亚、蒙古、尼日利亚、巴基斯坦、秘鲁、泰国、土耳其、委内瑞拉

Participants in total: 233

### 32 Brand Building 品牌建设

中心标识主要由橄榄枝、地球仪和北斗星座组成，寓意和平、全球视野、中国特色。

The design elements of the Logo mainly include olive-branch, globe and the Big Dipper (BeiDou in Chinese), symbolizing peace, global vision and Chinese characteristics.

Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (Affiliated to the United Nations)  
联合国附属空间科技教育亚太区域中心(中国)

✧ Intercultural Activity

On June 1<sup>st</sup>, 2018, the fifth Intercultural Activity in the spring of 2018 was held at the Centre. Participants from 2016 & 2017 MASTA/DOCSTA Program were in attendance. It was hosted by Ms. Wu Ke, student advisor of the Centre.

First of all, Mr. UZCATEGUI MELEAN ROBERTO JESUS and Ms. ELYKA ABELLO RODRIGUEZ from Venezuela, demonstrated Venezuela's national characteristics, local customs and practices and humanism in terms of its national profile, historical development, religious beliefs, natural resources, climate and weather, traditional food, sports, traditional dances and customs. In addition, the two participants also shared the unique stickers and snacks with others, further deepened their understanding of Venezuelan culture.



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### Brand Promotion 品牌建设

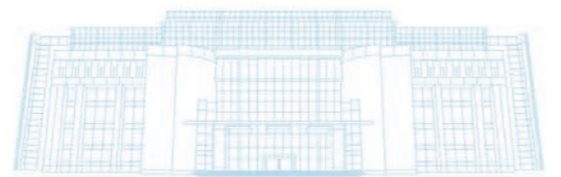
The Website of RCSSTEAP  
Down to the Earth while Aiming High

Reception Room of RCSSTEAP

The Newsletters of RCSSTEAP  
The Online Channel of RCSSTEAP

WEBSITE WECHAT

中心立足国际，中心网站和微信公众号发布最新信息，方便联系和沟通，提升国际影响力。  
The Centre continuously forges its brand to enlarge international influence by Newsletters, website, and WeChat public platform, etc.



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北京航空航天大学图书馆



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微信：UN\_Centre



Next, Peruvian trainees Mr. ANTERO CASTRO NIETO and Mr. LUIS RONCHI FARFAN introduced Peru's national profile, religious beliefs, tourist attractions and special diets through slides, map displays and promotional videos. The content was detailed and interesting, thus was loved by the participants.

The intercultural activities of this semester came to a successful conclusion. Through a semester of activities, the participants strengthened their understanding of cultural differences among different countries, improved their cross-cultural communication and adaptability, and better integrated into the diversified campus life of Beihang University. This series of activities is effective and will continue to be carried out regularly next term.



## Additional Words

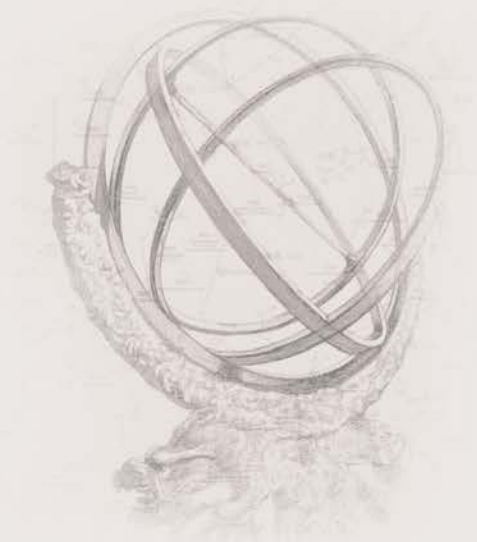
This issue of "Newsletter" records the main content of the Centre's work from May to August 2018, including Journey of Chinese Aerospace Technology and Culture 2018, participant representatives attending the 5<sup>th</sup> China International Satellite Service Business Matching, thesis defense and so on.

In June, twenty-eight (28) participants of MASTA2016 graduated, and thirty-six (36) participants of MASTA2017 completed the courses and would start thesis writing. Here, they participated in curriculum learning, professional practices, various international conferences and social activities, they had been constantly enriching themselves, challenging themselves, gaining knowledge, harvesting friendships and growth. Congratulations on the excellent results they have achieved along the way, and wish them a better future.

Thank you for your long-term concern and support, and you are welcome to provide valuable comments and suggestions. We will continue to make persistent efforts and innovation. I hope that "Newsletter" will connect us!



Graduation



联合国附属空间科技教育亚太区域中心（中国）  
Regional Centre for Space Science and Technology Education in Asia and the Pacific(China)  
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