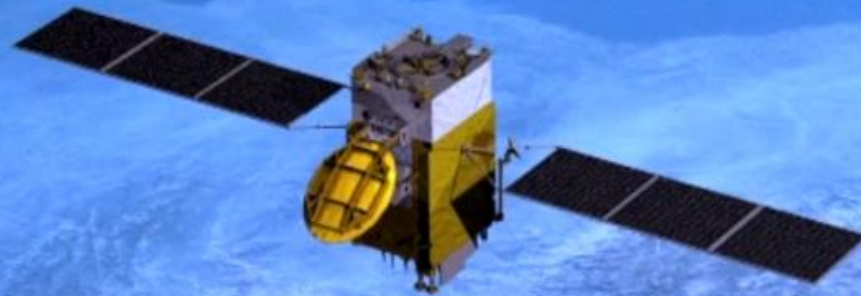




17<sup>th</sup> Meeting of the International Committee on  
Global Navigation Satellite Systems



# RCSSTEAP International Education and Capacity Building on BDS/GNSS



Dr. XIU Chundi

UN-RCSSTEAP (China)  
Beihang University, Beijing, China

October 17, 2023, Madrid

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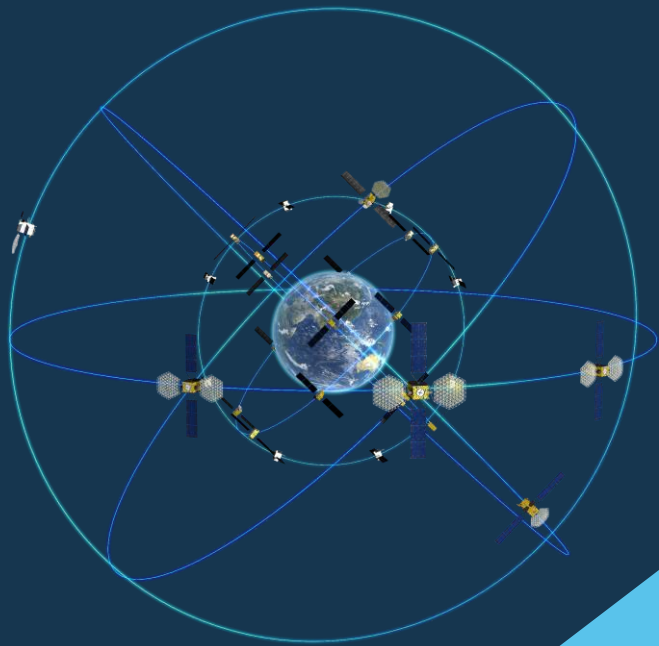
01 RCSSTEAP-China

02 Degree Programme

03 On BDS/GNSS

04 Capacity Building





RCSSTEAP-China

01

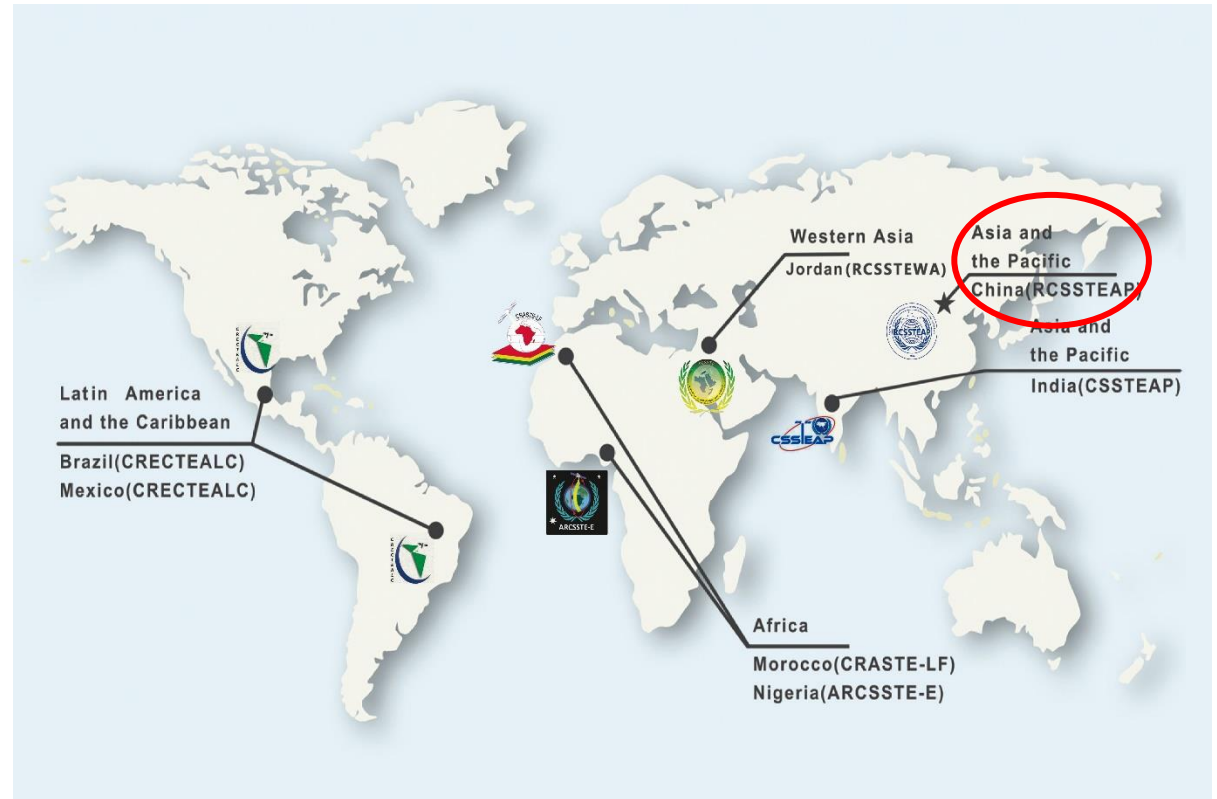


# RCSSTEAP-China

*Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (affiliated to the United Nations), shortly named **RCSSTEAP***



联合国附属空间科技教育亚太区域中心  
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

Regional Centre for Space Science and Technology Education in Asia and the Pacific  
(Affiliated to the United Nations)





# RCSSTEAP-China

***RCSSTEAP*** was supported by ***Committee on the Peaceful Uses of Outer Space (UN-COPUOS)***, and hosted by ***Beihang University, China***.



November 17, 2014

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

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北京航空航天大学

semester, New requirements, New

Algeria Argentina Bangladesh Bolivia Brazil China Indonesia Pakistan Peru Venezuela

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# RCSSTEAP-China



## *RCSSTEAP aims to be*

— *an education and training entity supported by UN-COPUOS.*

- **To promote the peaceful use of space technologies for the benefit of humanity.**
- **To sensitize the countries within the region about space science and technology activities by educating and creating awareness through training, workshops, short courses and outreaches.**
- **To facilitate the UN “Space Applications Programme” promoted by UN-COPUOS.**
- **To enhance 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 dissemination and training programs.**



Algeria



Argentina



Bangladesh



Bolivia



Brazil



China



Indonesia



Pakistan



Peru



Venezuela

# RCSSTEAP-China

- Meetings of the Governing Board



1<sup>st</sup> meeting, Nov. 17, 2014, Beijing, China



3<sup>rd</sup> meeting, Nov. 29, 2017, Beijing, China



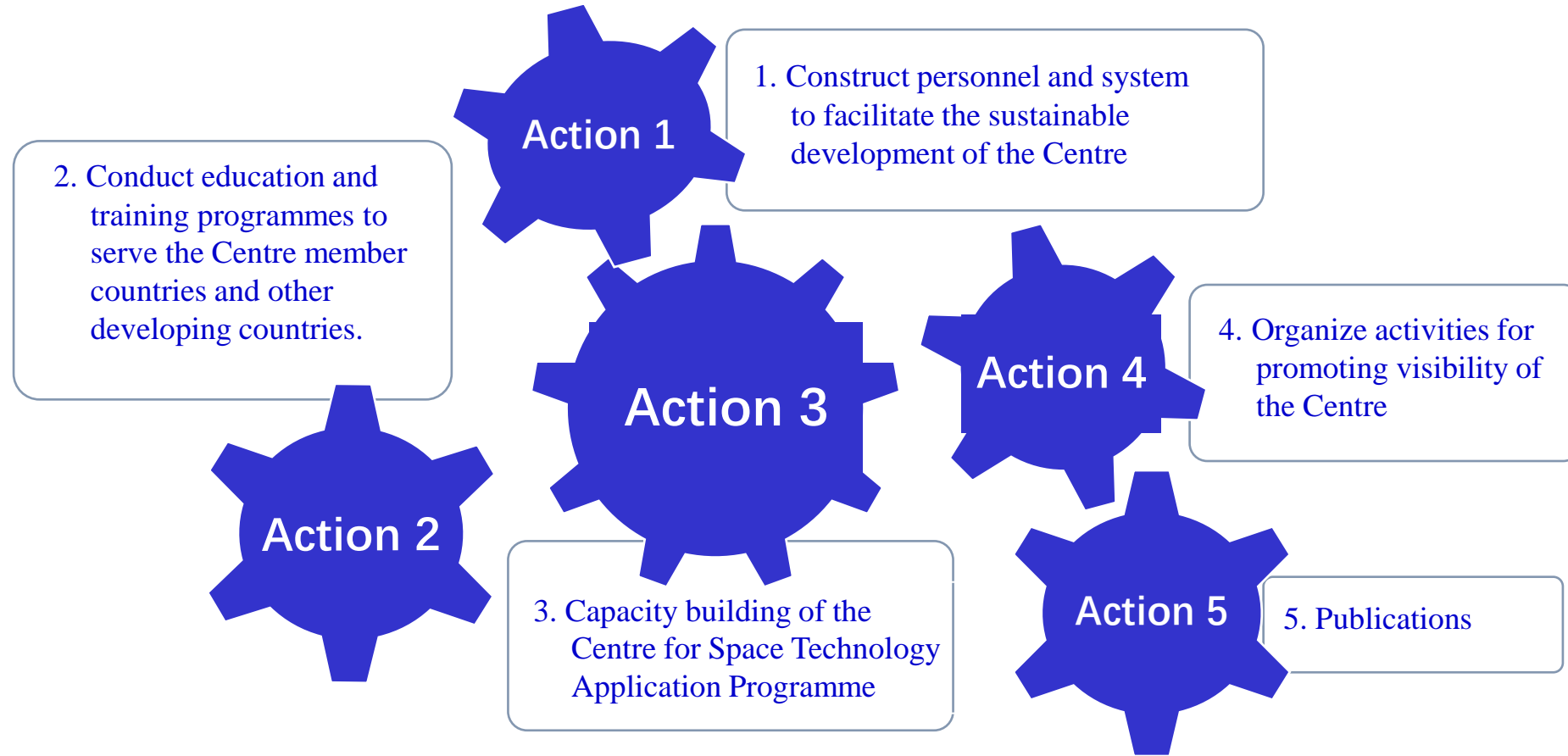
2<sup>nd</sup> meeting, Nov. 28, 2015, Beijing, China

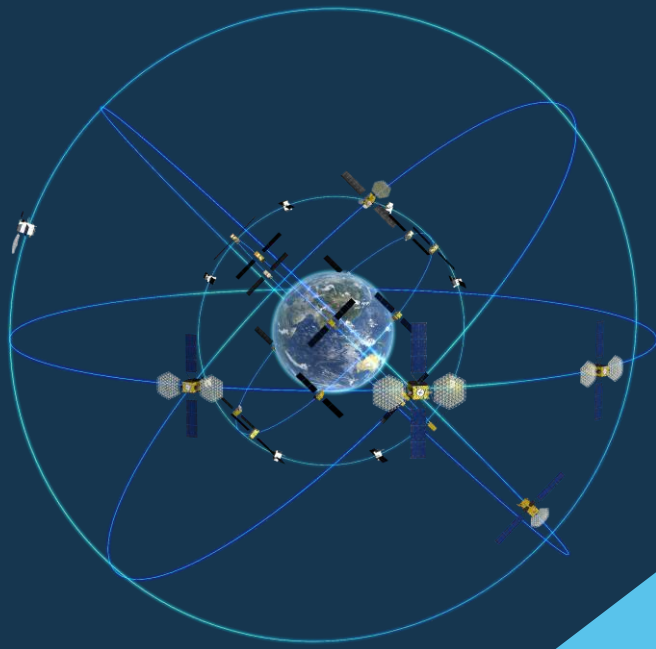


4<sup>th</sup> meeting, Dec. 9, 2019, Beijing, China



- **Annual Work Plan — 5 Actions**





Degree Programme

02



# Degree Programme

## *Master's and Doctoral Programme on **Space Technology Applications*** *(MASTA/DOCSTA 2006-2023)*

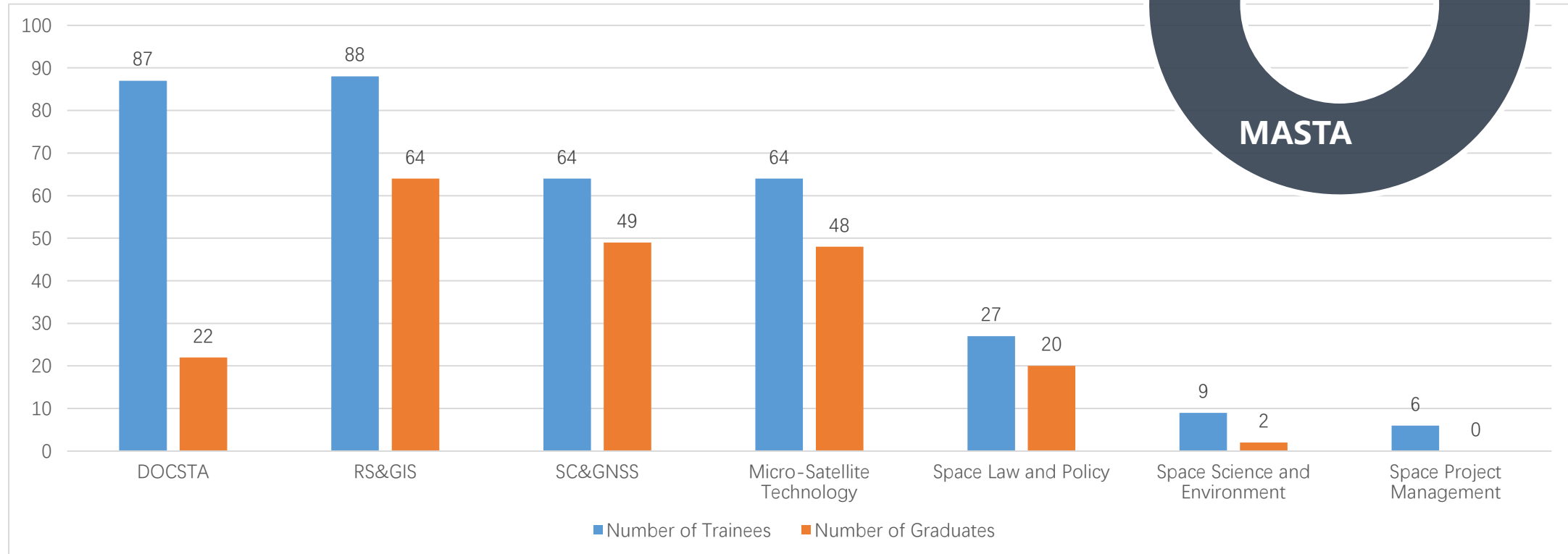
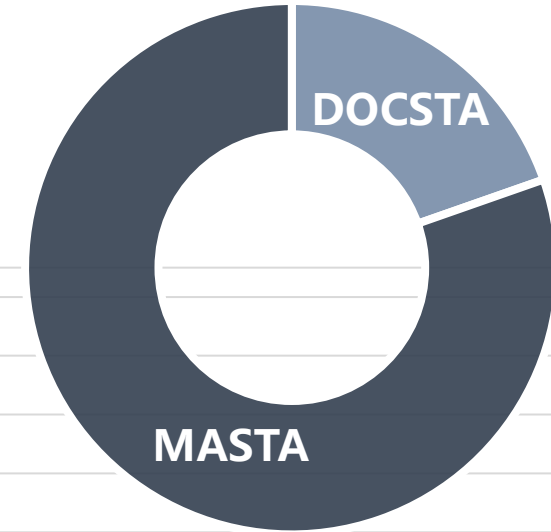
- Remote Sensing and GIS (2006)
- Satellite Communications (2008)
- Global Navigation Satellite Systems (2012)
- Micro-satellite Technology (2014)
- Space Law and Policy (2016)
- Space Science and Environment (2020)
- Space Project Management (2023)





# Degree Programme

*Number of participants in each direction*

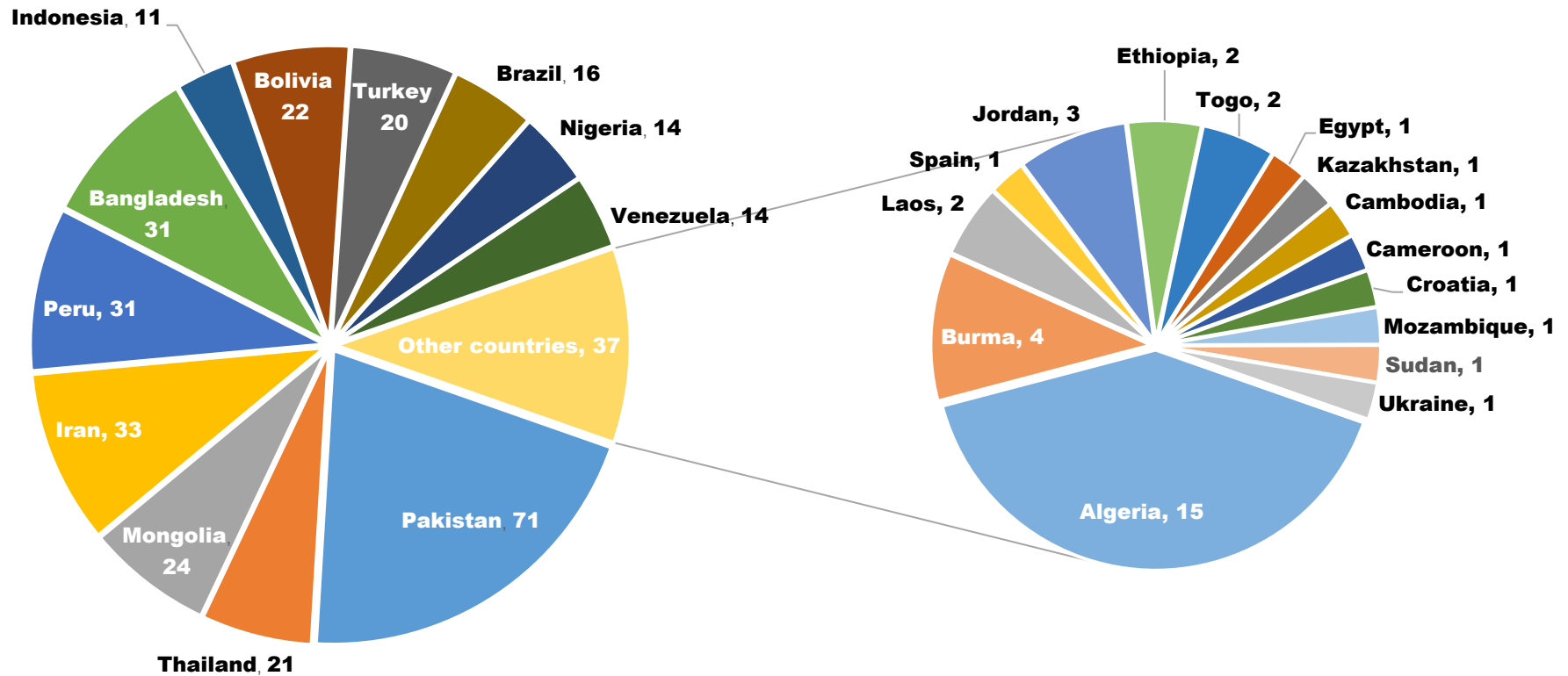


Totally **345** students, including 258 master and 87 doctoral students. **205** students have successfully graduated.



# Degree Programme

## Countries Distribution



The students come from 27 different countries

# Degree Programme

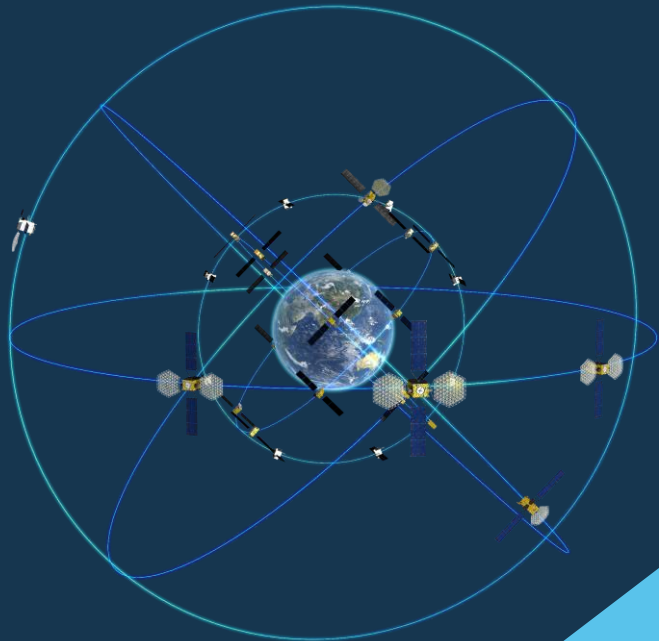
- 2023 Enrollment



# Degree Programme

- 2023 Professional Visits





On BDS/GNSS

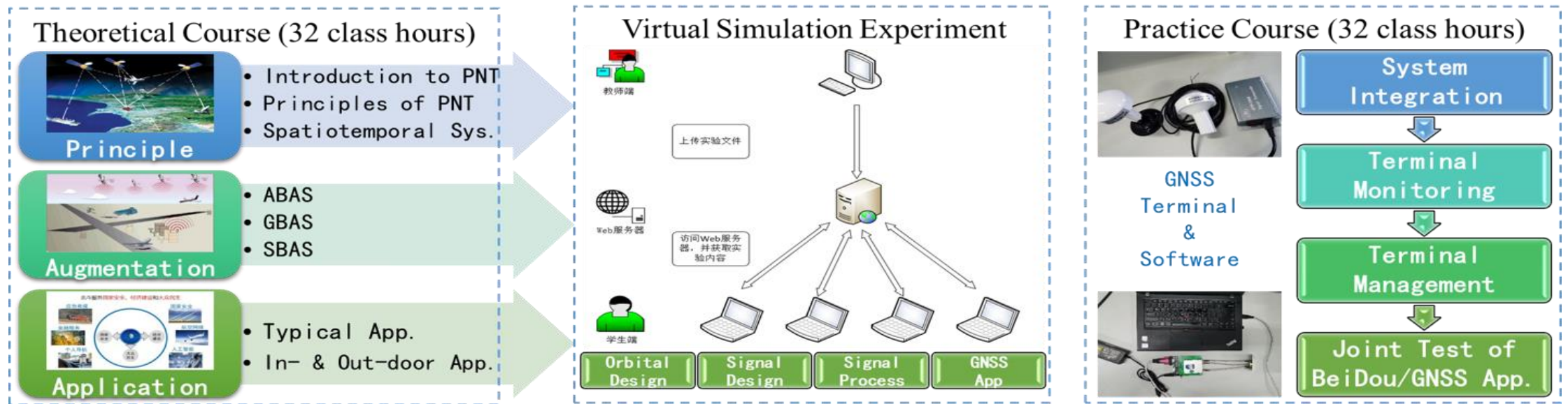
03



# On BDS/GNSS

## • Theoretical & Practice Courses

- **Wide coverage of students:** Sharing for domestic students among 7 universities in Beijing and for international students among 12 countries
- **Application and practice:** 32 hours theory class for GNSS principle + 32 hours practical class for out-door test
- **Real environment test:** Build the application environment of BDS/GNSS





# On BDS/GNSS

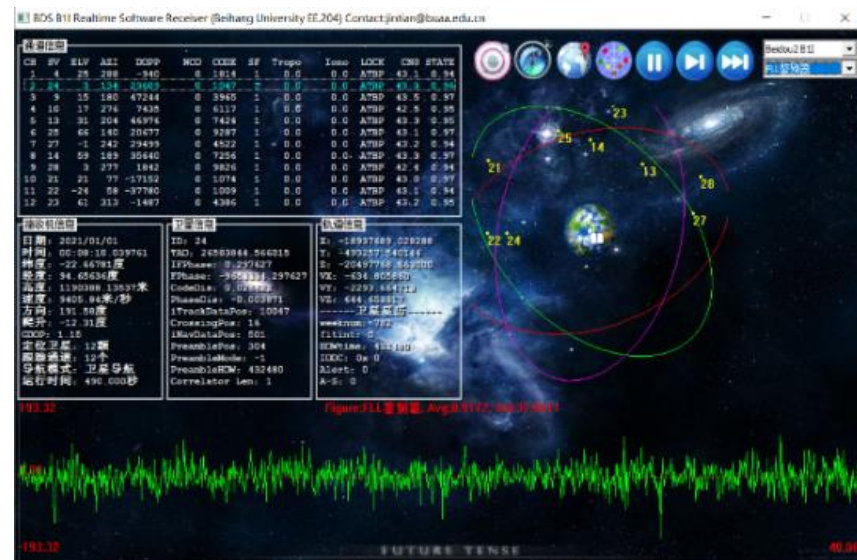
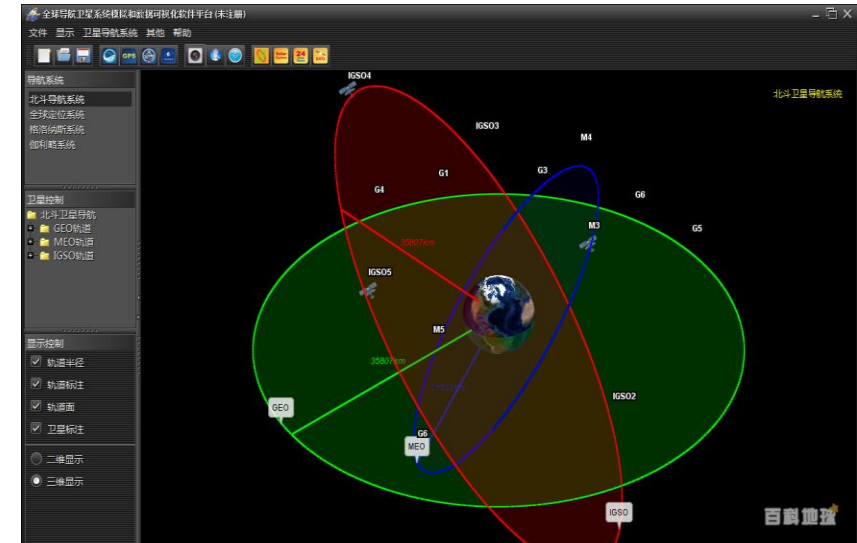
## • Virtual Simulation Experiment

✓ To support four typical virtual simulation experiments

- ① BDS/GNSS satellite orbit design
- ② BDS/GNSS satellite signal design
- ③ BDS/GNSS satellite signal processing
- ④ BDS/GNSS satellite navigation application

✓ To improve the **visualization effect** of the existing satellite navigation experimental content.

✓ To combine the theoretical teaching with hardware experiments, thus to improve the **teaching effect**.



# On BDS/GNSS

- Short-term Training

## *China-South Africa Training Courses on Satellite Navigation and Remote Sensing Applications*

(Nov, 17-21 2022, Pretoria-Beijing)

No.	Course Name	Hours
1	China's BeiDou Navigation Satellite System	2
2	Application of China's Resource Satellite	3
3	Application Cases of Resource Satellite in South Africa and Southern Africa	3
4	Application of Satellite Navigation System in Southern Africa	3
5	Application of BeiDou Navigation Satellite System (I)	3
6	Application of Remote Sensing Satellite in Southern Africa: agriculture & forestry; the human settlement thematic area	3
7	Application of BeiDou Navigation Satellite System (II)	3
8	Application of BeiDou Navigation Satellite System (III)	2.5



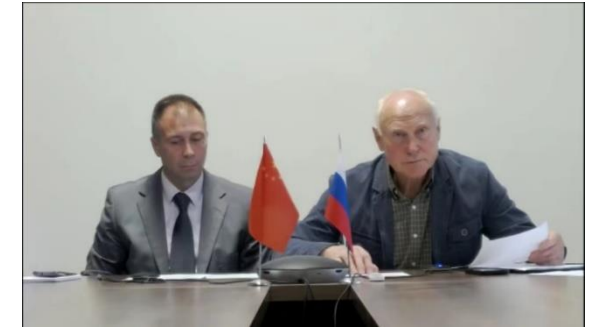
Totally 69 trainee from South Africa, Zambia, Mozambique, Zimbabwe, Namibia

# On BDS/GNSS

- Educational Cooperation

## *China-Russia Educational Cooperation*

- The 9th Meeting of Project Committee on China-Russia Satellite Navigation Strategic Cooperation (*October 13, 2023*)
  - ✓ China-Russia Education and Training Project
  - ✓ Joint monograph
  - ✓ Joint scientific papers
- International Conference on the Cooperation and Integration of Industry, Education, Research and Application (*November 10, 2022, Nanchang, China*)



# On BDS/GNSS

- Educational Cooperation

## *China-Africa Educational Cooperation Workshop* (August 9-14, 2023, Pretoria)



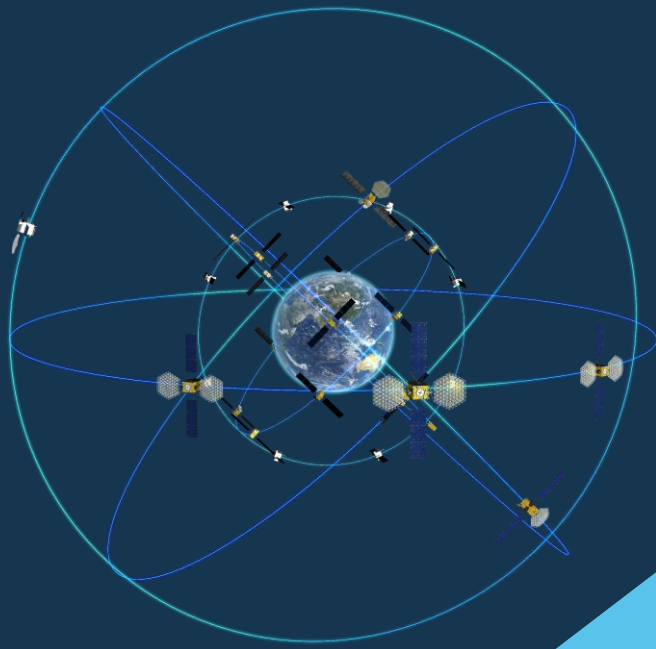
SANSI (South Africa National Space Agency)



UP (University of Pretoria)



CSIR (Council for Science and Industrial Research)



Capacity Building

04

# Capacity Building

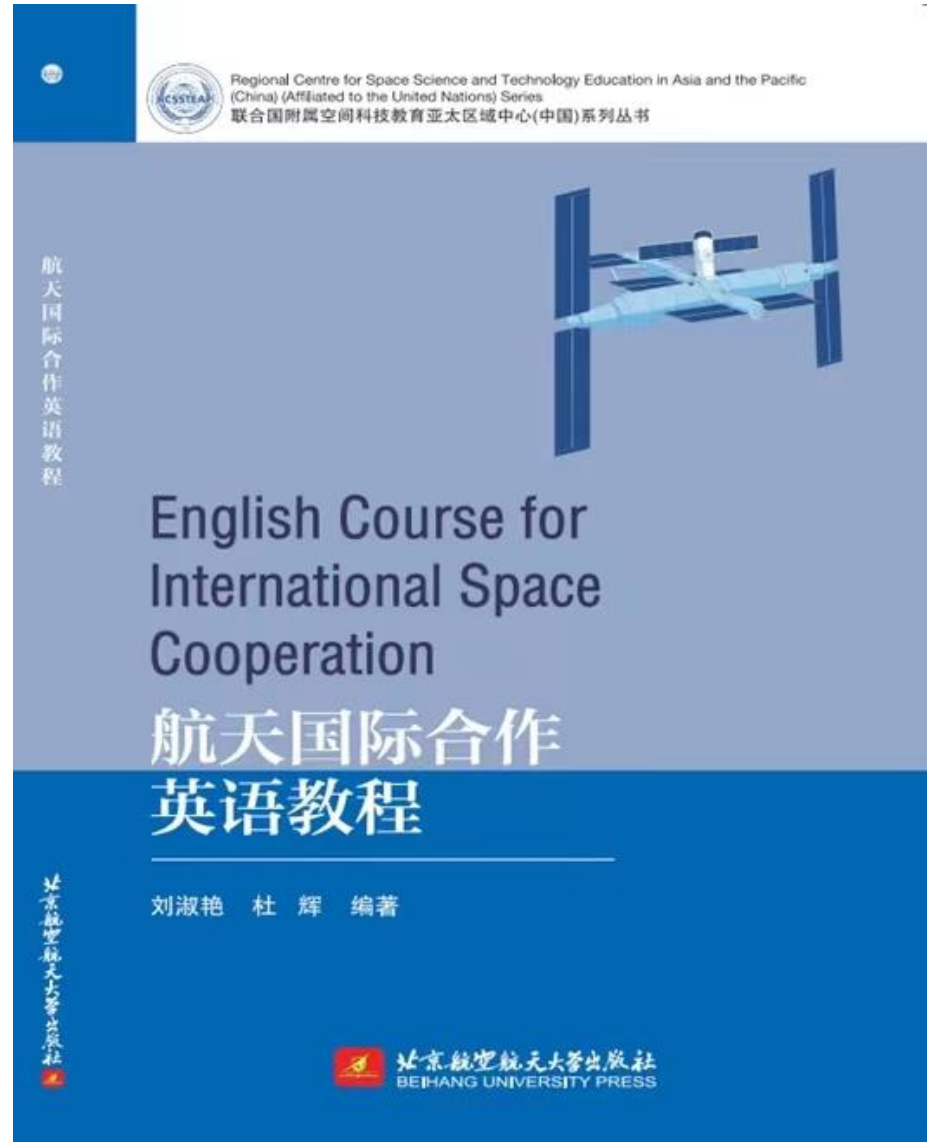
- Achievements

*So far, the Centre has trained **345** MASTA&DOCSTA participants for **27** developing countries and organized more than **20** short training programmes with over **1200** participants from more than **70** countries.*



# Capacity Building

- **Serial Textbooks**
  - ✓ English Courses for International Space Cooperation (*April 2023*)
  - ✓ Innovative methods and practices for China-Russia satellite navigation talents cultivating (*2024*)







# Capacity Building

- International Exchange



*The 66<sup>th</sup> Session of COPUOS*  
(June 4-10, 2023, Vienna)

*The 1<sup>st</sup> Youth Innovation Forum on Digital Earth*  
(August 9-14, 2023, Beijing)

*The 74<sup>th</sup> International Astronautical Congress (IAC)*  
(October 2-6, 2023, Baku)

*Forum on Disaster Prevention, Reduction and Relief*  
(October 11-12, 2023, Beijing)

# Capacity Building

- **International Exchange** (*in Beihang University*)



UN-SPIDER, April 17



University of Vanda, June 23



Union of Astronomy and Space Science, May 01



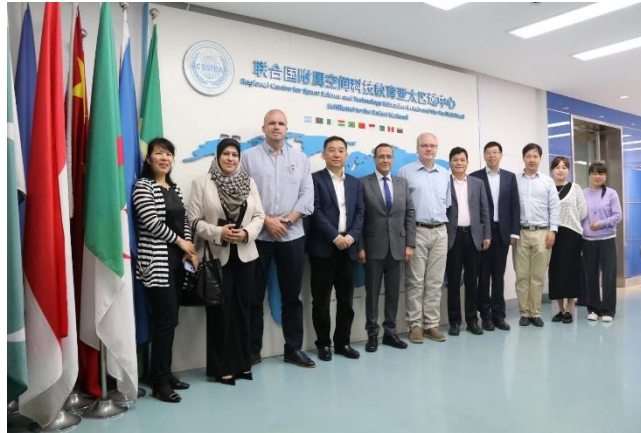
World University Presidents Forum, July 29



Association of African Universities, August 02

# Capacity Building

- **International Exchange**



**Driss El Hadani**  
Deputy Director General of UNOOSA  
(October 13, 2023)



## *Suggestions:*

1. *To promote the exchange between ARC*
2. *Workshop on **space project management** jointly hosted by UNOOSA and RCSSTEAP*
3. *High school level lectures for space activities*
4. *Courses & short-time training*



# *Future Plan*

- I. Membership expansion (Egypt, Qatar, United Arab Emirates and South Africa have expressed their interests in joining)
- II. Construction of *RCSSTEAP Branch* at Hangzhou International Campus of Beihang University
- III. Preparations for the **10th anniversary** of RCSSTEAP



# *Scholarships*

## *Announcement*

2024 Degree Programme will include GNSS, RS&GIS, Micro-satellite Technology, Space Law and Policy, Space Project Management.

*Scholarships are available for 40~50 students.*

*Quota will be offered for our partners*

The Announcement will be released in

<https://rcssteap.buaa.edu.cn>

## *Major Procedures*

- All applicants recommended by our member states or partners
- Material cooperation Review
- Online Interview
- Selected and approved by an expert team according to participants' overall performance

Online Application Time  
Jan.1, - May 31, 2024





Thank you

<https://rcssteap.buaa.edu.cn>