ARC- New Global Partnership for SDG and SPACE2030

WENG Jingnong
Dean, International School, Beihang University
Executive Director, the UN Regional Centre in China
Mar. 26, 2019 Amman, Jordan

北京航空航天大學
BEIHANG UNVIERSITY

1 **Understanding the UN Regional Centres**

2 **The UN Regional Centre in China**

3 **Alliance of UN Regional Centres**

4 **Capacity Building Research**

1

Understanding the UN Regional Centres

Objectives of the Centres (Re: A/AC.105/749 & A/AC.105/782)

In order to translate the recommendations of the Committee and the General Assembly into an operational programme, the Programme on Space Applications initiated a project aimed at the establishment of regional centres for space science and technology education at existing research and higher education institutions in each region covered by the United Nations Economic Commissions: Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, and Western Asia.

The principal goal of each centre is the development of the skills and knowledge of university educators and research and applications scientists, through rigorous theory, research, applications, field exercises, and pilot projects in those aspects of space science and technology that can contribute to sustainable development in each country.

Secretariat of COPUOS
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ARCSSTE-E
CRASTE-LF
CRECTEALC
CSSTEAP
RCSSTEWA
RCSSTEAP - China
Education Curricula

Region echnology Education in Asia ar

On 17 Novemb on in Asia and the Pacific (RCSSTEAP-China) was inaugurated at

The new Centr ished world-wide within existing nationa

The Centres a echnology that have the potential to advance social and economic development. Each Centre provides in-depth application programmes for university educators, as well as research and application scientists with an initial er emote sensing, satellite communications, satellite meteorology and space sciences. The Centres are affiliated ough a Memorandum of Understanding with the United Nations Office for Outer Space Affairs.

EXTERNAL PROJECTS: MASTA 2016 FELLOWSHIPS

The RCSSTEAP-China Centre and Beihang University are offering independent Master fellowships on Remote Sensing & GIS, GNSS, and Space Law and Policy. Please check the following link for more detailed information: MASTA 2016 Announcement.

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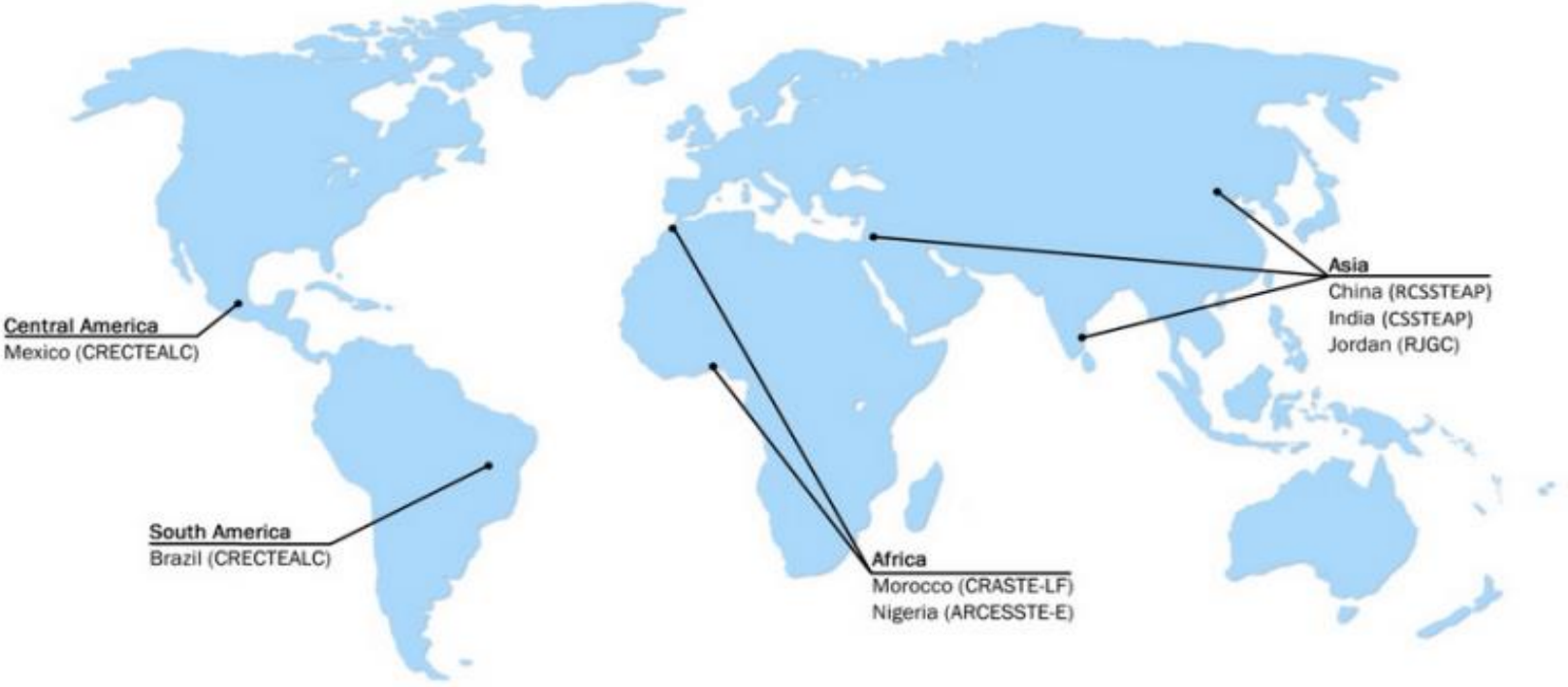
Regional Centres for Space Science and Technology Education
(affiliated to the United Nations)



CSSTEAP India (inaugurated in 1995)

CRASTE-LF Morocco (inaugurated in 1998)

ARCESSTE-E Nigeria (inaugurated in 1998)

CRECTEALC Mexico and Brazil (inaugurated in 2003)

RCSSTEWA / RJGC Jordan (inaugurated on 29 May 2012)

RCCSTEAP China (inaugurated in 2014)

73 countries among the 6 Regional Centres

The initial programmes of each centre focused on the following four core disciplines:

- *remote sensing and geographic information systems;*
- *meteorological satellite applications;*
- *satellite communications and geopositioning systems;*
- *space and atmospheric sciences.*

With the increasing demand for space applications, the following core disciplines were added:

- *global navigation satellite systems;*
- *basic space science and technology (Micro-satellite technology);*
- *space law and policy, etc.*

According to rough estimation, the Regional Centres have trained hundreds of graduates through degree programmes and thousands of participants through short training programmes in the related fields of space technology and applications.

1 Understanding the UN Regional Centres

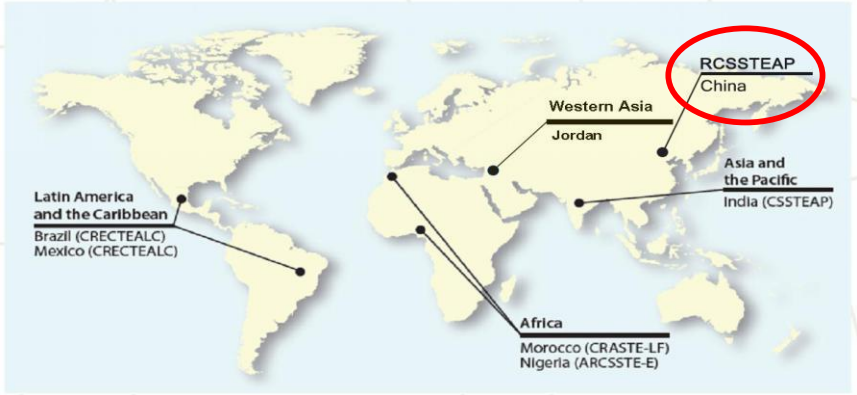
2 The UN Regional Centre in China

3 Alliance of Regional Centres

4 Capacity Building Research

2

The UN Regional Centre in China



Established in 2014

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)

Algeria Argentina Bangladesh Bolivia Brazil China

Indonesia Pakistan Peru Venezuela

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 Establishment of RCSSTEAP**: November 17, 2014
- **Mission**: Promoting the peaceful use of space technologies for the benefit of all humankind.
- **Vision**: Openness, Innovation, Inclusiveness
- **Principle**: Down to the Earth while Aiming High

2013.2

Application
Making a proposal at the 50th session of Scientific and Technical Subcommittee of UN COPUOS

2013.6

Approved by the Subcommittee of COPUOS at the 56th session of COPUOS

2013.9

Passing 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)

2014.9

Organizing International Space Education Forum at the 65th International Astronautical Congress (IAC), Toronto

2014.10

Signing agreements with contracting parties

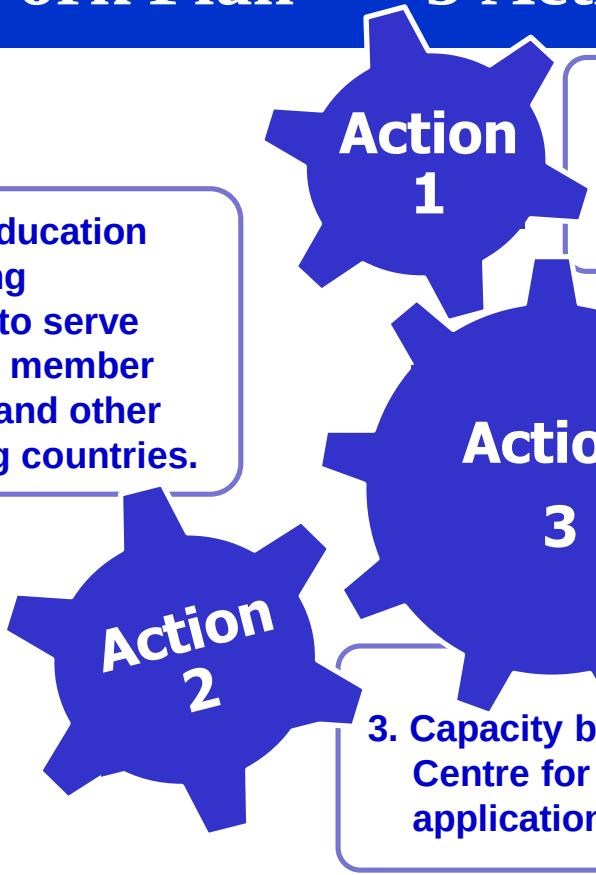
2014.11

The Inauguration Ceremony
The 1st Meeting of the Governing Board

开放 创新 包容

Openness Innovation Inclusiveness

Annual Work Plan — 5 Actions



1. Construct personnel and system to facilitate the sustainable development of the Centre

2. Conduct education and training programs to serve the Centre member countries and other developing countries.

3. Capacity building of the Centre for space application programme

4. Organize activities for promoting visibility of the Centre

5. Publications

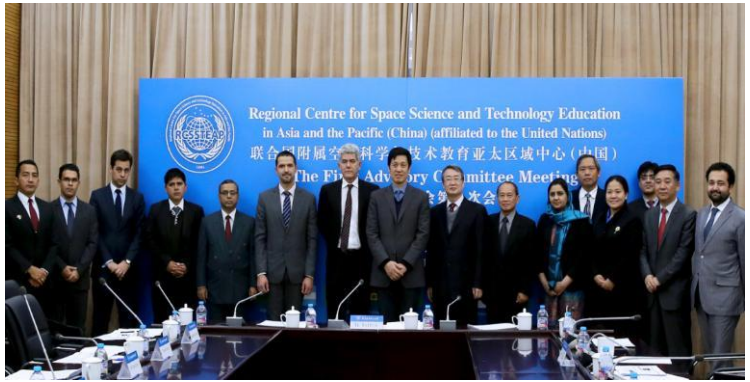
Governing Boarding Meetings

The 1st Governing Boarding Meeting
November 17, 2014 in Beijing

The 2nd Governing Boarding Meeting
November 28, 2015 in Beijing

The 3rd Governing Boarding Meeting
November 29, 2017 in Beijing

Advisory Committee Meetings



The 1st Advisory Committee Meeting
December 6, 2016 in Beijing

The 2nd Advisory Committee Meeting
November 22, 2018 in Beijing

Degree Programs and Short Training Programs

Master's Program	260 in total, 21 countries, 159 participants have been granted Master's Degree
Doctoral Program	60 in total, 13 countries, 12 participants have been granted Doctoral Degree
Short Training Programs	About 1500 in total, 68 countries

Short Training Programs in 2018

GNSS and BeiDou System Deep Understanding Training **Tunisia**, Apr. 11-13, 2018

Training on Space Cooperation for Global Health **China**, Apr. 12-26, 2018

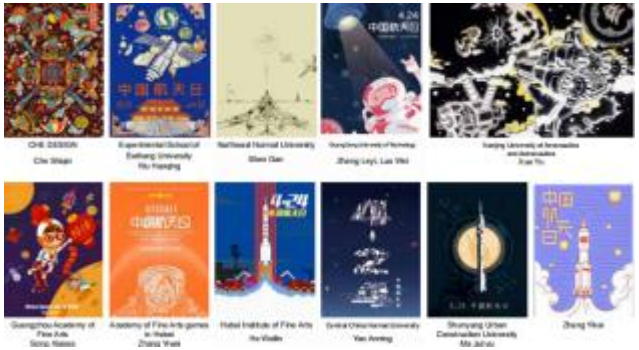
CRASTE-LF & RCSSTEAP-China GNSS Workshop **Morocco**, Apr. 23-26, 2018

GNSS and BeiDou System Deep Understanding Training **Sudan**, Sept. 24-25, 2018

Short Training in Satellite Technology CRASTE-LF **Morocco**, Oct. 22-26, 2018

International Training Programme “Space based technology for emergency response” **China**, Oct. 28-Nov. 1, 2018

Outreach



Poster Design Contest for China Space Day
April, 2018

Journey of Chinese Aerospace Technology and Culture
March-May, 2018

UNISPACE+50 Aerospace Exhibition in Vienna
June, 2018

Latest News

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http://www.rcssteap.org

Latest Announcements


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Exhibition


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Participants' Feedback

ALI AMJAD
Pakistan

- Overall MASTA program is a very good program. It offer lots of learning either by its study program or through technical visits to various organization working in the field of Remote Sensing and GIS.

PROMCHOT
DARUNEE
Thailand

- The Space Technology Application Program on Global Navigation Satellite System (GNSS) course. It gathers the important knowledge in GNSS field and advances skill for GNSS application. Furthermore, I have opportunities to visit famous GNSS companies and the great experience to participate in the important conference in GNSS field.

ARTITTHANG
PEERAWAT
Thailand

- The staff and teacher who responsible to take care us are very good.

Participants' Feedback

ENKH-AMGALAN BALDANSAMBUU
Mongolia

- During the program, being involved in symposiums, conferences, seminars, workshops and other activities is useful for students and evaluation of MASTA and DOCSTA programs.

SUMIYA ALTANGEREL
Mongolia

- High resolution stereo image, and its processing is very useful for my future. Therefore, I recommending stereo image processing, UAV, IMU technology's courses based on china's satellites products instead of space policy, laws course.

FAHAD AYESHA KOSAR
Pakistan

- MASTA & DOCSTA are very useful for us and such programs should be continued.

中国航天

China Great Wall Industry Corporation

China Academy of Space Technology

China Centre for Resources Satellite Data and Application

Shanghai Academy of Spaceflight Technology

China Academy of Launch Vehicle Technology

BeiDou Navigation Satellite System

UniStrong 合众思壮

Beijing UniStrong Co., Ltd.

北斗星通 BDStar Navigation

Beijing BDStar Navigation Co., Ltd.

ChinaRS 中科遥感

ChinaRS Geoinformatics Co., Ltd.

CASIC

Beijing Aerospace TITAN Technology Co., Ltd.

21AT

Twenty First Century Aerospace Technology Co., Ltd.

APSCO

ASIA-PACIFIC SPACE COOPERATION ORGANIZATION

NDRCC 民政部国家减灾中心

UN-SPIDER Beijing Office

HIST

International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO

Nssc 中国科学院国家空间科学中心 National Space Science Center . CAS

Space Debris Observation and Data Application Center China National Space Administration

National Satellite Meteorological Center

Institute of Remote Sensing and Digital Earth

National Astronomical Observatories Chinese Academy of Sciences

National Time Service Center

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

Host Institution - Beihang University

北京航空航天大學
BEIHANG UNVIERSITY

Beihang University was the first aerospace university in China established in 1952. It has been engaged in international space education with the support of CNSA since 2000.

Schools	31
State Key Laboratories	8
Undergraduate Programs	57
Master's Programs	144
Doctoral Programs	49
Students	29,211
Undergraduates	15,620
Graduates	13,591
International students	2,367
Faculty & Staff	3,885

QUICK FACTS

The Main Campus

located in Zhongguancun Science Park, Haidian District

At the heart of higher learning and technology development

30-min drive from Tian’anmen Square

Shahe Campus

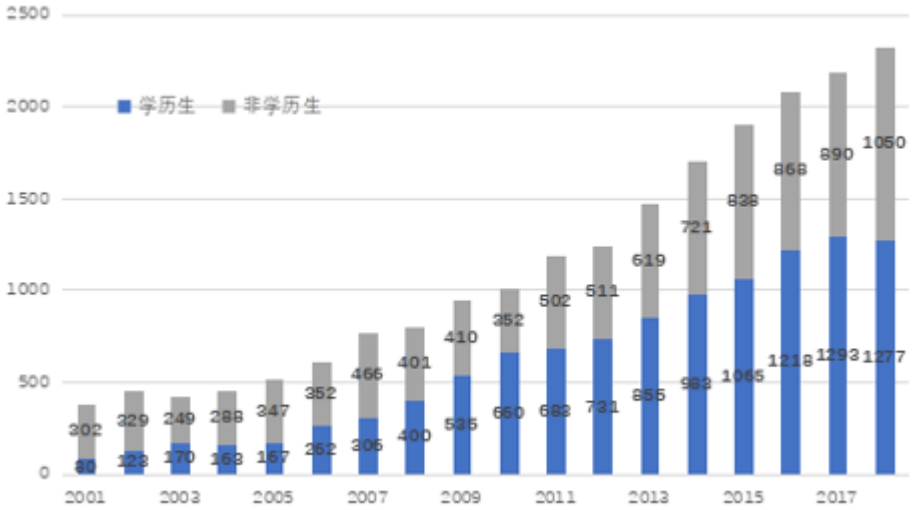
located in Changping District, 100 hectares

27km away from the main campus

Study at

BEIHANG UNIVERSITY

Light the Dream



2200+International Students in 2018

北京航空航天大學
BEIHANG UNVIERSITY

from 129 countries

*2018年11月更新数据
Data updated in November 2018


CSSTEAP
联合国附属空间科技教育亚太区域中心
ORDEM E PROGRESSO

UGII — *for International Space Education*

U ——Hosted by **U**niversity

G ——Supported by Chinese **G**overnment

I ——Work with Related **I**nternational Organizations (UNOOSA, APSCO, etc.)

I ——**I**ndustry/Enterprise Participation

Beihang Mode

1 Understanding the UN Regional Centre

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3

Alliance of Regional Centres for Space Technology Edcuation

(affiliated to the United Nations)

New Global Partnership for the implementation of the goals of SDG and SPACE2030

Full name of ARC: Alliance of Regional Centres for Space Science and Technology Education (Affiliated to the United Nations)?

Q1: Can ARC be an observor of UNCOPUOS?

Q2: What is the mechanism of ARC?

Q3: How will ARC support SDG and Space2030?

the umbrella of UNOOSA

University Partners Enterprise Partners

Alliance of Regional Centres (ARC)

We are committed to Space Education.

Member States of Each Regional Centre

Centres	Governing Board Members	UNOOSA Status
ARCSSTE-E 25	Botswana, Cameroon, Egypt, Ethiopia, Eritrea, Ghana, Kenya, Lesotho, Liberia, Mauritius, Malawi, Mozambique, Nigeria, Namibia, Somalia, Swaziland, Sudan, South Sudan, South Africa, Sierra Leone, Tanzania, Gambia, Uganda, Zambia and Zimbabwe	Observer
CRASTE-LF 13	Algeria, Cameroon, Cabo Verde, Central African Republic, Democratic Republic of Congo, Côte d'Ivoire, Gabon, Mauritania, Morocco, Niger, Senegal, Togo and Tunisia	Observer
CRECTEALC 2	Brazil, Mexico	Observer
RCSSETWA 11	Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, State of Palestine, Sudan, Sultanate of Oman, Syria and Yemen	Observer
CSSTEAP 16	DPRK, India, Indonesia, Iran (Islamic Republic of), Kazakhstan, Kyrgyzstan, Malaysia, Mongolia, Myanmar, Nauru, Nepal, Philippines, Republic of Korea, Sri Lanka, Thailand and Uzbekistan	Observer and Chair of Advisory Committee
RCSSTEAP 10	Algeria, Argentina, Bangladesh, Bolivia, Brazil, China, Indonesia, Pakistan, Peru and Venezuela	Observer

Programmes of Each Regional Centre

Centres / Programme	ARCSSTE-E	CRASTE-LF	CRECTEALC	CSSTEAP	RCSSTEWA	RCSSTEAP
RS&GIS	√	√	√	√	√	√
SATCOM	√	√	√	√	√	√
GNSS	√	√	√	√		√
Micro Sat. Tech./ Small Sat. Mission				√		√
Space Law and Policy			√	√		√
SAS & Space Sd.	√		√	√	√	
SATMET	√	√		√	√	

√ Programme offered

Glance of Each Regional Centre

ARCSSTE-E, inaugurated in 1998

CRASTE-LF, inaugurated in 1998

CRECTEALC, inaugurated in 2003

CSSTEAP, inaugurated in 1995

RCSSTEWA, inaugurated in 2012

RCSSTEAP, inaugurated in 2014

Co-Organized with UNOOSA, the Meeting of the Directors of the UN Regional Centres was held on 13-14 June, 2017 at Vienna International Centre. To establish an ***ARC- Alliance of Regional Centres*** *was proposed .*

Meeting of the Directors

February 2018, Vienna, Austria

June 2018, Vienna, Austria

Joint Exhibition during UNISPACE+50

June 2018, Vienna, Austria

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4

Capacity Building Research

Capacity Building Index Research

Capacity Building *is the process by which individuals and organizations obtain, improve, and retain the* ***skills, knowledge, tools, equipment and other resources*** *needed to do their jobs competently or to a greater capacity (larger scale, larger audience, larger impact, etc.).*

Problems with current capacity building efforts:

- *links between needs and supply are weak;*
- *training institutions are isolated and communications are limited;*
- *insufficient development of teaching materials;*
- *alternative methods of capacity building are not adequately recognized;*
- *a lack of funding.*

Education Capacity Building Index Framework

Evaluation indicators (Level I)	Evaluation indicators (Level II)
Teacher team building	Qualified teachers
	Management team
	Invited experts
Teaching activities	Degree program
	Training courses
	Academic lectures
	Professional visits
Infrastructure construction	School buildings
	Teaching equipment
	Experimental equipment
Educational environment	Educational platform
	Experimental teaching conditions
	Practical teaching base
Information dissemination	Website
	Publications
	Textbook & teaching materials
Funding support	Government funding
	Social fund-raising
	Crowdfunding
	Collaborative projects funding

Regional Centre: Postgraduate Program is prerequisite?

It is easy to predict the future, if you invent it.

Flying with the wings of art

Thank you for your attention!

website: www.is.buaa.edu.cn, www.rcssteap.org
e-mail: wengjn@buaa.edu.cn