



Update of GNSS/BeiDou Education and Training Activites

13th Meeting of the International Committee on Global Navigation Satellite Systems

WENG Jingnong

Director, BeiDou International Exchange and Training Centre (BD-IETC)

Dean, International School, Beihang University, Beijing, China

November 06, 2018 Xi'an, China









- 1 Postgraduate Program
- **2** Training Activities
- 3 International Exchange
- information Dessemination

Beihang University has initiated Master program on Space Technology Applications (MASTA) since 2006.

- **■Global Navigation Satellite Systems**
- Remote Sensing and GIS
- Satellite Communications
- **■**Micro-satellite Technology
- Space Law and Policy

The program are designed for improving space education of developing countries.



Referring to the Education Curricula of UN-PSA, the study period is divided into two phases.

Phase I: Course Study (9 months at Beihang University) (Leading to Course Completion Certificate of)								
Formulation of an Individual Training Plan	Module I Common Platform Courses	Module II • Major courses • Academic Lectures • Professional Visits	Module III Team Pilot Project or Practical Courses					
Phase II: Thesis Research (12 months in China or home country) (Leading to Master's Degree in Engineering)								
Literature Survey and Thesis Proposal	Midterm Assessment	Academic Activities	Thesis Defense					

- Tailor-made Curriculum
- Teaching Language: English

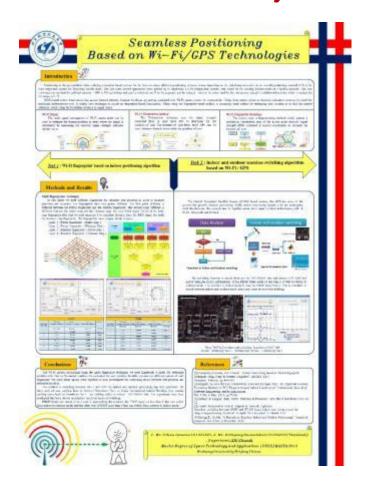
9-month Course List

No.	Item	Class Hrs	Credits	Remark			
	Module I Platform Courses						
PC1-1	Probability and Statistics in Engineering	48	3	Select at least 3			
PC1-2	Theory of Matrix	48	3	compulsory			
PC1-3	Numerical Analysis	48	3	credits			
PC2-1	Matlab Programming	32	2	Compulsory/ Optional			
PC3-1	Space Environment, Orbit and Spacecraft Systems	48	3	Compulsory			
PC3-2	Introduction to Space Technology Applications	18	1	Compulsory			
PC3-3	International Cooperation in the Peaceful Uses of Outer Space	16	1	Compulsory/ Optional			
PC3-4	Introduction on Space Life Science and Astrobiology	18	1	Compulsory/ Optional			
PC4-1	Introduction to China and Chinese Language	54	3	Compulsory			
	Module II Major Courses						
MC3-1	GNSS Reference System	18	1	Compulsory			
MC3-2	Principle of GNSS	32	2	Compulsory			
MC3-3	GNSS Receiver Principles and Design	32	2	Compulsory			
MC3-4	GNSS/INS Integration Navigation	32	2	Compulsory			
MC3-5	GNSS Applications	18	1	Compulsory			
MC3-6	Satellite Navigation Data Processing	32	2	Compulsory			
MC3-7	GNSS Experiment	18	1	Compulsory			
MC3-8	GNSS New Technologies	18	1	Compulsory			
Module III Team Pilot Projects							
PPC	Team Pilot Project	12 Weeks	8	Compulsory			

Academic Lectures & Professional Visits



Team Pilot Projects







Thesis Research









Colorful Extracurricular Activities





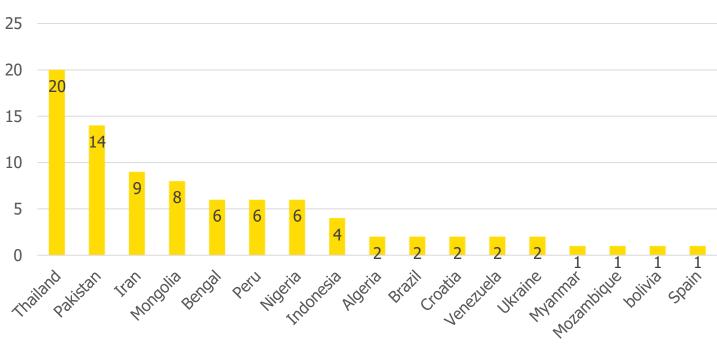
Achievement in GNSS degree program

Program	Year	Number	Countries of Participants	
Master's	2017	11	Bangladesh, Bolivia, Mongolia, Pakistan, Peru, Thailand, Turkey	
Program	2018	6	Ethiopia, Peru, Turkey, Iran, Pakistan	
Doctoral	2017	11	Algeria, Bangladesh, Iran, Pakistan, Thailand, Turkey, Venezuela	
Program	2018	11	Bangladesh, Indonesia, Iran, Nigeria, Pakistan, Thailand	



Achievement in GNSS degree program

Degree Award





2012-2018 Student Number

Our Characteristics

UGII — New Mode for GNSS Degree Education

U — Hosted by University

G —Supported by Chinese Government

I — Work with Related International Organizations

(UNOOSA, APSCO, etc.)

I — Industry/Enterprise Participation

Quality Assurance

- 1 Globalization of Faculty
- 2 Directional Enrollment
- 3 Enterprise Cooperation

- 1 Postgraduate Program
- **7** Training Activities
- 3 International Exchange
- Information Dessemination

GNSS Short Term Training

Topic	Date	Place	Trainee
2017 International Workshop on BDS Technology & Applications	Nov. 26-Dec. 8, 2017	Beihang University, China	23 (Egypt, Gambia, Nigeria, Iraq, Thailand, Indonesia, Sudan, Pakistan, Mongolia, Bangladesh, Bolivia)
GNSS and BeiDou System Deep Understanding Training	Apr. 11-13, 2018	China-Arab BDS/GNSS Center (AICTO), Tunisia	38 (Tunisia, Morocco, Egypt)
CRASTE-LF & RCSSTEAP-China GNSS Workshop and Applications	Apr. 23-26, 2018	African Regional Centre for Space Science and Technology Education (in French Language), Morocco	Nearly 30 (Morocco, Algeria, Niger, Senegal, Tunisia, Cameroon, Central Africa Republic)
BeiDou System Technology and Applications	Aug. 2018	Naresuan University, Thailand	More than 30 (Thailand)
The 2 nd GNSS Short-term Training of AICTO	Sep. 24-26, 2018	The Friendship Hall, Khartoum, Republic of Sudan	162 (Sudan, Egypt, Zambia, Lebanon)

International Workshop On BeiDou Technology & Applications

Nov. 26-Dec. 8, 2017 in Beijing, China



China-Arab BDS/GNSS Center (AICTO) Opening Ceremony & GNSS and BeiDou System Deep Understanding Training Apr. 11-13, 2018 in Tunisia







CRASTE-LF & RCSSTEAP-China GNSS Workshop

Apr. 23-26, 2018 in Rabat, Morocco











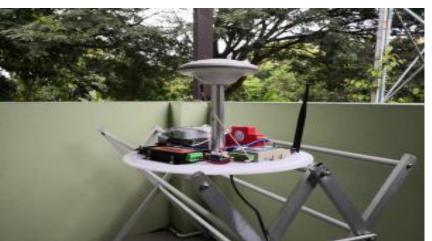


BeiDou System Technology and Applications Aug. 2018 in Thailand









China-Arab BDS/GNSS Center (AICTO) the 2nd GNSS Short-term Training Sep. 24-26, 2018 in Sudan









- 1 Postgraduate Program
- **Training Activities**
- 3 International Exchange
- Information Dessemination

Participated in the Sessions UN-COPUOS

- The 55th Session of the Scientific and Technical Subcommittee of UN-COPUOS (Jan. 29-Feb. 9, 2018 in Vienna)
- The 61st session of UN-COPUOS & the UNISPACE+50 aerospace exhibition (Jun. 17-26, 2018 in Vienna)



Regional Centre Conference for the establishment of Alliance of Regional Centres (ARC)



Directors Meeting of the Regional Centres for the progress and contribution to space education of ARC

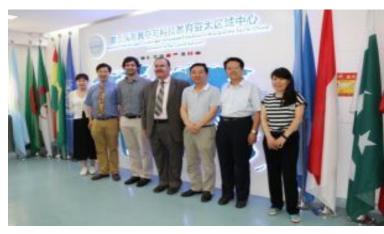




Dr. Agbaje Ganiyu Ishola from UN regional Centre in Nigeria, April, 2018



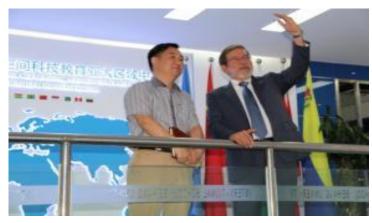
Prof. Abderrahmane from CRASTE-LF in **Morocco**, Nov., 2017



Dr. Awni from UN regional Centre in **Jordan**, May, 2017



Mr. Raimundo from UN regional Centre in **Brazil**, Dec., 2016



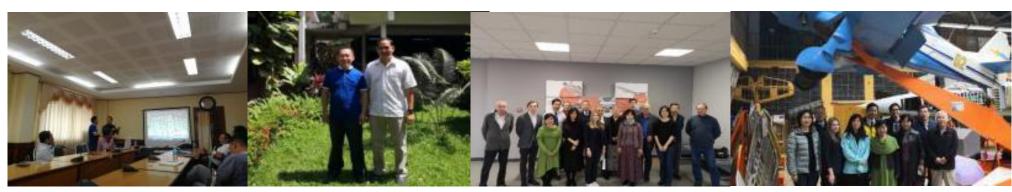
Mr. Sergio Camacho from UN regional Centre in Mexico, Sep., 2016



Guests from UN regional Centre in India, Sep., 2015

Exchanges with other Countries





Laos Russia

BeiDou Belt & Road School Joint Construction



- 1 Postgraduate Program
- **7** Training Activities
- 3 International Exchange
- Information Dessemination

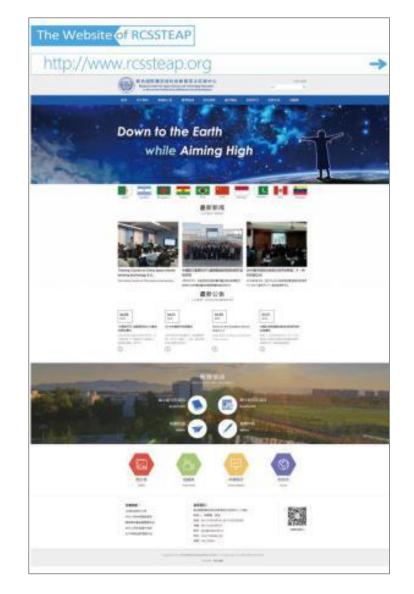


WHAT'S NEWS

www.beidou.gov.cn



Information Dissemination









Website

BeiDou Education and Research Network



Study at BEIHANG UNIVERSITY

Light the Dream

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





Thank you for your attention

