Seminar on

Recent Progress in Space Antenna Technology and Applications of NSSC Chinese Academy of Sciences

By

Professor Hongjian Wang

National Space Science Center, CAS, China

Date : **25 January 2017 (Wednesday)**
Time : **11:00 am – 12:00 noon**
Venue : **Room 15-202, meeting room of State Key Laboratory of Millimeter Waves, 15/F, Lau Ming Wai Academic Building, City University of Hong Kong**

Abstract

This presentation introduces some of the research activities conducted in the Space Antenna Group (CAS Key Lab. of Microwave remote Sensing) of National Space Science Centre (NSSC), Chinese Academy of Sciences (CAS).The presentation starts with a few words about the CAS Key Lab. of Microwave remote Sensing, NSSC. Then some of the research activities conducted in our group are introduced:

1. External space requirements for antennas: introduce the special demands for the payload antenna subsystem.
2. Space Antenna Design: our work deals with methods for the design of payload antenna subsystem (Computational Electromagnetics, Thermal Analysis, Mechanical Analysis) and software
3. Several payload antennas in NSSC,CAS: 1)TG2 3D Imaging Altimeter(China Manned Space Flight-II, Launched Sep. 2016);2) HY2 Altimeter and Calibration Radiometer(Haiyang-II Ocean Dynamics Satellite, Launched Aug. 2010);3) FY3 MHS Microwave Humidity Sounder(Fengyun-3 Meteorological Satellite, Launched in 2008,2010,2013),etc..
4. Inflatable antenna and Terahertz Antenna.

Biography

Hongjian Wang, born in 1986,Professor & Ph.D. supervisor of National Space Science Center (NSSC), Chinese Academy of Sciences(CAS), Course Professor of University of CAS, IEEE member

1. Education Background:
B.S. Wuhan University, China, 1986
M.S Wuhan University, China, 1990
Ph. D. Beijing Institute of Technology, China, 2002

2. Professional Experience：
2008-present, Professor in National Space Science Center, CAS, China
2004-2008, Associate Professor in National Space Science Center, CAS, China
2003-2004, Postdoc National Space Science Center, China
2002-2003, Department of E.E, City University of Hong Kong, RA
1993-1999, Luoyang Optoelectronics Research Institute, Engineer, China

3. Research Interests:
Space antenna theory and technology, Microwave Theory and Technology, Computational Electromagnetics, Terahertz technology

4. Awards and Fellowships：
Second Class prize of Chinese National Defense Science and technology progress
Third Class prize of Chinese Army Science and technology progress

5. Major Scientific Contributions and Achievements:
1) Deputy Director of the designers of TG2 3D Altimeter (China Manned Space Flight-II, Launched Sep. 2016)
2) Deputy Director of the designers of HY2 Altimeter (Haiyang-II Ocean Dynamics Satellite, Launched Aug. 2010)
3) Deputy Director of the designers of HY2 Calibration Radiometer (Haiyang-II Ocean Dynamics Satellite, Launched Aug. 2010)
4) Deputy Director of the designers of HY2-B Altimeter (Haiyang-II-B Ocean Dynamics Satellite, in progress)
5) Deputy Director of the designers of HY2-B Calibration Radiometer (Haiyang-II-B Ocean Dynamics Satellite, in progress)
6) Deputy Director of the designers of HY2-C Altimeter (Haiyang-II-C Ocean Dynamics Satellite, in progress)
7) Deputy Director of the designers of HY2-C Calibration Radiometer (Haiyang-II-C Ocean Dynamics Satellite, in progress)
8) Deputy Director of the designers of FY3 MHS Microwave Humidity Sounder (Fengyun-3 Meteorological Satellite, Launched in 2008, 2010, 2013, in progress)
9) Heads of more than 14 National 863(National High Technology Research and Development Program) research projects.

6. List of Publications:
1).Hongjian Wang etal., Potter Horn and Compact Orthomode Transducer at150 GHz, IEEE Trans.on AP, VOL. 62, NO. 10, OCTOBER 2014
2).Hongjian Wang etal., Inflatable Antenna System For Space Use, IEEE Antenna Propagation Magazine,2012.
3).Liu guang，Wang Hongjian，A High-Efficiency Transmitarray AntennaUsing Double Split Ring Slot Elements, IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, VOL. 14, 2015,p1415-1418

4).Fei xue, hongjian wang, Design of a Broadband Single-Layer Linearly Polarized Reflectarray Using Four-Arm Spiral Elements,IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, 2016.
5).Fei Xue, Hongjian wang,A broadband Ku-Band microstrip reflectarray antenna using single-Layer fractal elements, Microwave and Optical Technology Letters Vol. 58, No. 3, March 2016

***** ALL ARE WELCOME *****

Enquiries:
Professor Chi Hou Chan, State Key Laboratory of Millimeter Waves
Tel.: (852) 3442 9360 Fax: (852) 3442 0353 Email: eechic@cityu.edu.hk