

Program of WSANE2006

Venue: Conference room at Xidian University,
Xi'an, China

Date: April 10-12, 2006

Schedule:

Mon, Apr 10, 2006 09:00 - 17:20 Satellites related technique (Room 306)
Tue, Apr 11, 2006 09:30 - 16:50 Remote sensing (Room 302), Communication (Room 304)
Wed, Apr 12, 2006 09:30 - 11:50 Navigation (Room 302), Signal processing (Room 304)

PLACE:

3rd floor, Western Building of the Library, Xidian University, Xian, China
No.2 SOUTH TaiBai ROAD XI'AN, Shaanxi, 710071, P.R.CHINA.
<http://www.ieice.org/cs/sane/WSANE2006/index.html>.

General presentation : 20 minutes for presentation and discussion
Invited talk : 30 minutes for presentation and discussion

Mon, Apr 10 (09:00 - 9:40) Opening Ceremony (Room 306)

Chair: Hong YANG (CAST)

Opening Speech **by Yoshiaki Suzuki (NiCT, Japan), Workshop Chair**
Welcome Speech **by the President of Xidian University**
Introduction of the Workshop Preparation **by Prof. Chengke Wu**

Mon, Apr 10 (9:50 - 17:45) Topic : Satellites (Room 306)

Chair: Yoshiaki SUZUKI (NiCT)

(1) 9:50 - 10:20

[Invited Talk]

Outline of Shenzhou-6 Spacecraft

Hong Yang (CAST)

(2) 10:20 - 10:40

SELENE Integrated Mission Operation System for the Lunar Exploration

Hirokazu Hoshino, Yoshio Ishido, Yoshisada Takizawa (JAXA)

(3) 10:40-11:10

[Invited Talk]

On-board Payload Data Management System for CHANG'E-1

Huixian Sun, Xiaomin Chen (CSSAR,CAS), Yunsong Li (Xidian Univ.)

(4) 11:10-11:30

Space Technology Demonstration by Small and Micro Satellites in Jaxa

Yasunori Iwamaru, Hidekazu Hashimoto, Isao Nozu, Keiichi Hirako, shinichiro Nishida, Hiroshi Tachihara, Shinichi Okada, Yosyuke Nakamura, Matsuaki Kato, Hiroaki Kawara, Shinichiro Takayama, Yutaka Komatsu (JAXA)

(5) 11:30 – 11:50

On-orbit servicing and its breakthrough approach using small satellite

Shinichi Kimura, Yasufumi Nagai, Hiroshi Yamamoto (NiCT), Hiroshi Kozawa, Shinobu Nakamura, Kazumi Masuda, Naohiko Abe (MHI)

----- Lunch Break (70 min.) -----

Chair: Korehiro MAEDA (JAXA)

(6) 13:00 - 13:30

[Invited Talk]

Progress of TT&C on Chinese Meteorological Satellites

Yuheng Li (Xian Satellite Control Center), Kechu Yi (Xidian Univ)

(7) 13:30 - 14:00

[Invited Talk]

X-ray observation of celestial objects using the X-ray CCD

Hiroshi Tsunemi, Kiyoshi Hayasida, Emi Miyata, Ken'ichi Torii, Hideki Ozawa, Naohisa Anabuki, Masaaki Namiki (Osaka Univ.), Kazuhisa Miyaguchi (HPK), Suzaku, Xis (JAXA etc.)

(8) 14:00 - 14:20

Data processing and Communication of MAXI(Monitor of All-sky X-ray Image) on the International Space Station

Mitsuhiro Kohama, Tatehiro Mihara, Naoki Isobe (RIKEN), Hiroshi Tomida, Naoyuki Kuramata, Shiro Ueno, Kazuyoshi Kawasaki, Takao Yokota, Harufumi Katayama, Masaru Matsuoka (JAXA), Hitoshi Negoro (Nihon U.), Nobuyuki Kawai (TIT), Hiroshi Tsunemi, Emi Miyata (Osaka U.), Asumasa Yoshida (AGU)

(9) 14:20 - 14:40

Development of a 10 Kg-class Micro Satellite for the Observation of Sprites and Atmospheric Lightning Events

Yukihiro Takahashi, Kazuya Yoshida, **Hiroki Nakanishi**, Takafumi Hoichi, Kazutaka Kimura, Shinya Ueda (Tohoku Univ.), Tomonao Hayashi, Koji Yokoyama, Shigeru Hosokawa (Chiba. Inst. Tech.), Yoshidanari Masumoto (Masumoto P.E. Office)

(10) 14:40 - 15:00

A On-line Method to Determine the Satellite Orbit Based on Multi-Observed Distance Data

Zhu Zhuan-min, Xu Zong-ben (xi'an jiaotong uni.)

(11) 15:00 - 15:20

Fault-tolerant Flight Computer for Spacecraft Attitude and Orbit Control

Kotaro Moritani, Yasuo Ishige (NTSpace), Takanori Iwata (JAXA)

----- Break (20 min.) -----

Chair: Tomonao HAYASHI (Chiba Inst. of Tech.)

(12) 15:40 - 16:00

Air-breathing mode laser propulsion technology for mini-satellites and design of ring focusing optics system

Lei Shi, Shanghong Zhao, Jie Xu, Shengbao Zhan, Ruiping Zhu (Air Force Engineering Univ.)

(13) 16:00 - 16:20

Current Status of Cycle-Life Testing for Large-Capacity Lithium-Ion Cell Simulated Satellite Operation at JAXA

Xianming Wang, **Hitoshi Naito**, Chisa Yamada, Go Segami, Koichi Kibe (JAXA)

(14) 16:20 - 16:40

Output Power Variation Analysis on Solar Arrays of Three-axis Stabilized GEO Satellites

Zheng Jun (Unit 63999 of CPLA), Wang Shan (Institute of China Electronic System Engineering Corporation)

(15) 16:40 - 17:00

Feasibility Study of the Environmental Tolerance of Hard Disk Drives

Takeshi Sasada, Masanobu Yajima (JAXA)

(16) 17:00 - 17:20

Development of Ka-band Active Phased Array Antenna for WINDS

Takehito Iguchi, Shiro Kitao, Kuniaki Shiramatsu (Mitsubishi Electric Corp.), Masanobu Yajima, Masaaki Shimada, Yasuo Nakamura (JAXA)

Tue, Apr 11 (09:30 - 17:20) Topic : Remote Sensing (Room 302)

Chair: Zhongming ZHAO (IRSA,CAS)

(17) 09:30 - 10:00

[Invited Talk]

Review of Remote Sensing Applications in China

Zhongming Zhao, Wenjie Wang (IRSA,CAS)

(18) 10:00 - 10:20

Outline of Earth observation data distribution service in JAXA/EOC

Miyano Yoshikazu (JAXA)

(19) 10:20 - 10:40

Development of the Spaceborne Dual Frequency Precipitation Radar for the Global Precipitation Measurement Mission

Yumi Senbokuya, Yasuyuki Ishii, Hiroshi Hanado, Kinji Furukawa, Masahiro Kojima (JAXA), Nobuhiro Takahashi, Toshio Iguchi (NICT)

(20) 10:40 - 11:00

Sharing studies for spaceborne L band SAR to contribute to disaster monitoring

Korehiro Maeda (JAXA)

(21) 11:00 - 11:20

Initial CAL/VAL of PALSAR

Masanobu Shimada, Manabu Watanabe, **Toshifumi Moriyama**, Takeo Tadono (JAXA)

(22) 11:20 - 11:40

The Case Study of Interferometric SAR by PALSAR

Takashi Fujimura, Tsunekazu Kimura (NEC), Norimasa Ito (JAXA)

----- Lunch Break (80 min.) -----

Chair: Kazuo OUCHI (Kochi Univ. of Tech.)

(23) 13:00 - 13:20

Analysis of the Bragg resonance scattering in L-band JERS-1 SAR and Pi-SAR images of rice paddies

Kazuo Ouchi, Haipeng Wang (KUT), Naoki Ishitsuka (NIAES), Genya Saito (Tohoku Univ.), Kentaro Mohri (Okayama Univ.)

(24) 13:20 - 13:40

On the accuracy of empirical relation between forest biomass and order parameter of K-distribution in Pi-SAR images

Haipeng Wang, Kazuo Ouchi (KUT), Manabu Watanabe, Masanobu Shimada (EORC/JAXA)

(25) 13:40 - 14:00

Development of a multistatic atmospheric radar with digital receiver arrays

Koji Nishimura, Eikoh Gotoh, Tomoyuki Harada, Toru Sato (Kyoto Univ.)

(26) 14:00 - 14:20

On RCS Computation Using Asymptotic PO with Surface Modeled by NURBS

Gang Wu, ShuXi Gong (XiDian Univ.)

(27) 14:20 - 14:40

Target classification algorithm using netted radars

Masafumi Shimada, Kei Suwa, Kazuhiko Yamamoto, Masafumi Iwamoto (Mitsubishi Electric)

----- Break (20 min.) -----

Chair: Yoshio KOSUGE (Nagasaki Univ.)

(28) 15:00 - 15:20

Minimization of Search Interval Using Multiple Radars

Masashi Shiraishi, Teruyuki Hara (Mitsubishi Electric Corp.)

(29) 15:20 - 15:40

Tracking Method Using a Weighted Measurement Covariance Matrix

Yoshio Kosuge (Nagasaki Univ.)

(30) 15:40 - 16:00

Long Term Monitoring for Disaster Prevention by Radio Phase Displacement : An Experimental Result

Takeshi Amishima, Nobuhiro Suzuki, Atsushi Okamura, Wataru Yoshizaki, Etsuji Kuroda, Keiichi Nishikawa (Mitsubishi Electric Corp.), Yuzo Onishi, Satoshi Nishiyama (Kyoto Univ.)

(31) 16:00 - 16:20

Localization over Small Body Surface by Radio Assistance

Tetsuo Yoshimitsu (ISAS/JAXA), Sayaka Higo (Univ. of Tokyo), Ichiro Nakatani (ISAS/JAXA)

(32) 16:20 - 16:40

Signal Processing of GPR Data for Landmine Detection

Yoshiyuki Tomizawa (Gunma College of Tech.), **Suraj Shrestha** (Univ. of Elec. Comm.), Shinji Gotoh (Tau Giken), Shanker Man Shrestha (Meisei Elec. Corp.), Ikuo Arai (Univ. of Elec. Comm.)

Tue, Apr 11 (09:30 - 17:20) Topic : Communication (Room 304)

Chair: Bin TIAN (Xidian Univ.)

(33) 09:30 - 09:50

Performance studies for MSE-OFDM, OFDM and single-carrier systems in frequency selective fading channels
Yuefen Chen, Bin Tian (Xidian Univ.), Xianbin Wang (CRC Canada), Yong Wang, Kechu Yi (Xidian Univ.)

(34) 09:50 - 10:10

An Analysis to the Symbol Timing in OFDM
Chen Chen, Chang Xing Pei, **Changhua Zhu** (Xidian Univ.)

(35) 10:10 - 10:30

Adaptive MIMO-OFDM With Beamforming Based on Limited Feedback
Xuefang Liu, Fenglin Fu (Xidian Univ)

(36) 10:30 - 10:50

Link Adaptation Algorithm Based On Gliding Window For IEEE 802.16d System
Nai'an Liu, Wuqiang Li, Weihong Fu (Xidian Univ.)

(37) 10:50 - 11:10

A key information hidden transmission scheme for TDMA satellite confidential communication
Xuekun Hao (CMCT Research Institute), Kechu Yi (Xidian Univ.), Wang Fei (CMCT Research Institute)

(38) 11:10 - 11:30

Two Low-Complexity Decoding Algorithms for Unitary Space-Time Codes
Xin Su, **Kechu Yi**, Bin Tian, Yongjun Sun (Xidian Univ.)

----- Lunch Break (90 min.) -----

Chair: Kimio KONDO (NIME)

(39) 13:00 - 13:30

[Invited Talk]
Outline of Satellite Communications in china
Chunting Wang, Shenfu Pan, Jingqiao Chen

(40) 13:35 - 13:50

Results of the Operation of Satellite Collaboration Network(SCS)
Kimio Kondo, Noritaka Osawa (NIME)

(41) 13:50 - 14:10

Capacity Analysis of MF-CDMA Cellular Networks Based on LEO Satellite Constellation
Yiwei Zhang (Xi'an Microelectronics Technology Institute), Kechu Yi (Xidian Univ.), Xubang Shen (Xi'an Microelectronics Technology Institute)

(42) 14:10 - 14:30

ETS-VIII Ground Terminal Applications for Disaster Scene
Hirokazu Fukanoki (JAXA)

(43) 14:30 - 14:50

Joint Source Channel Coding for Deep Space Communications
Song Xiao, Chengke Wu, Yunsong Li, Jianchao Du, Jianlong Zhang (Xidian Univ)

----- Break (20 min.) -----

Chair: Ke-chu Yi (Xidian Univ.)

(44) 15:10 - 15:30

Error Control Coding and Video Compression for Spacecraft Data-Handling Systems
Haruhiko Kaneko (JAXA)

(45) 15:30 - 15:50

A Parity Check Matrix Design for LDPC Codes Based on Chaos Model
dong liang xiao (dong liang xiao)

(46) 15:50 - 16:10

Blind Adaptive Narrowband Interference Suppression in DSSS
Yong-jun Sun, Ke-chu Yi (Xidian Univ.)

(47) 16:10 - 16:30

Performance of Quasi-orthogonal Time Division Multiplexing in Fading Channels
Enchang Sun, Hua Dong, Yong Wang, **Kechu Yi** (Xidian University)

(48) 16:30 - 16:50

Cryptanalysis of A Threshold Signature Scheme for Group Communications without a Shared Distribution Center
Liaojun Pang, Huixian Li, Yumin Wang (Xidian University)

Wed, Apr 12 (09:30 - 11:20) Topic : Navigation (Room 302)

Chair: Chunting Wang

(49) 09:30 - 10:00

[Invited Talk]

Development and Applications of China's Satellite Navigation Technology

Li Bin (NERC(Shijiazhuang)), Li Wenduo (CETC54), Xu Shilong (NERC(Shijiazhuang))

(50) **Cancellation**

~~**High Accuracy Clock Synchronization Experiment**~~

~~*Shinichi Nakamura*, Nobuo Kudo (JAXA)~~

(51) 10:00 - 10:20

Spaceborne GPS receiver prototype with new L2C signal tracking capability

-- Preliminary report on real signal tracking demonstration --

Toru Yamamoto, Yoshiyuki Ishijima, Toshio Itoh, Hideto Suzuki (Japan Aerospace Exploration Agency), Shozo Nakazato, Susumu Kumagai, Peter Buist (NEC TOSHIBA Space Systems, Ltd.)

(52) 10:20 - 10:40

Research and Application of Kalman Filter to Loran C System

Zhang Hui, Deng Jun

(53) 10:40 - 11:00

Overview of Methods of Aircraft Height Monitoring for the Safety of the Reduced Vertical Separation Minima (RVSM) Airspace

Sakae Nagaoka (ENRI)

(54) **Cancellation**

~~**Wake Vortex Detection of Departure Aircraft**~~

~~*Takefumi Komatsubara*, Nobuyuki Kaku (ENRI)~~

(55) 11:00 - 11:20

Results of an evaluation of a multilateration with Radio On Fiber connection

Tadashi Koga, Hirohisa Tajima, Shigeru Ozeki (ENRI)

Wed, Apr 12 (09:30 – 11:50) Topic : Signal Processing (Room 304)

Chair: Wu Chengke, Zhao Yimin (Xidian Univ.)

(56) 09:30 - 09:50

Optical Design and Data Processing of LASIS

Ma Jing, *Wu Chengke*, Li Yunsong, Chen Dong (Xidian Univ.)

(57) 09:50 - 10:10

A method of software construction based on unitary model

Chaobo Chen (XIT), Changxing Pei, Xueqin Yang (Xidian University), Gang Qin (XIT)

(58) 10:10 - 10:30

A fast smart antenna algorithm for UCA unitary music

Zhao Yimin, Lu Hongmin, Xie Wenchao (Xidian Univ.)

(59) 10:30 - 10:50

Realization of MUSIC Algorithm on TMS320C671

Zhao Yimin, Li Min (Xidian Univ.)

(60) 10:50 - 11:10

A Simple Algorithm for Single tone Frequency Estimation

Guangliang Ren, Hui Zhang, Yilin Chang (Xidian Univ.)

(61) 11:10 - 11:30

Algorithm for Signal Blind Separation Applying to Communication Reconnaissance

Weihong Fu (XiDian Univ.), Xiaoniu Yang (Jiangnan Electronic Communications Research Institute), Fan Shi (ZTE corporation)

(62) 11:30 - 11:50

Novel Method for Blind Recognition of Communication Signal Based on Time-frequency Analysis and Neural Network

Weihong Fu (XiDian Univ.), Xiaoniu Yang (Jiangnan Electronic Communications Research Institute), Xingwen Zeng, Naian Liu (XiDian Univ.)