

# 2nd Nano- Satellite Symposium

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## Program

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## 1st Day (March 14, Monday)

10:00 - 10:15	<b>Opening remarks for the 2nd Nano-satellite symposium</b> <i>Shinichi Nakasuka (University of Tokyo)</i>
10:15-10:30	<b>Rules and Evaluation Criteria of Mission Idea Contest</b> <i>Jerry Sellers (Chair of MIC review team)</i>
Mission Idea Contest Final Presentation	
10:30 - 10:50	<b>Experiment of Tethered Nanosatellite Flying with Electrodynamic Tether</b> <i>Zhu Zheng Hong, Benoit Larouche, Robert Zee, York University</i>
10:50 - 11:10	<b>Demonstration of Optical Stellar Interferometry with Near Earth Objects (NEO) using Laser Range Finder by a Nano Satellite Constellation: A Cost effective approach</b> <i>Shanti Swaroop Kandala, Abrar-UI-Haq Khan Baluch, KAIST</i>
11:10 - 11:30	<b>Space Advertiser (S-VERTISE)</b> <i>Hakan Aykent, Ilke Akbulut, Istanbul Technical University</i>
11:30 - 11:50	<b>The Service for Individual to Meet Space: Future Space Funeral</b> <i>Koichi Fujihira et.al, Satellite System Design Club</i>
11:50 - 12:10	<b>ExoplanetSat Constellation</b> <i>Mary Knapp, Ian Jeffrey Sugel, MIT</i>
12:10 - 13:40	<b>Lunch</b>
Mission Idea Contest Final Presentation	
13:40 - 14:00	<b>A Global Water Pollution Monitoring Satellite System (WAMS)</b> <i>Phan Manh Dan, Ha Van Quang, Trinh Hoang Quan, Vietnam Academy of Science and Technology</i>
14:00 - 14:20	<b>Northern Communication and GPS-based science Nanosatellite constellation mission</b> <i>Regina Lee, Scott Gleason, Sunil Bisnath, York University</i>

14:20 - 14:40	<b>Distributed Multispectral Imaging System</b> <i>Richard Long, Surrey Satellite Technology Limited</i>
14:40 - 15:00	<b>Integrated Meteorological / Precise Positioning Mission Utilizing Nano-Satellite Constellation</b> <i>Yuki Sato, Munetaka Kashiwa, Mitsubishi Electric Corporation</i>
15:00 - 15:20	<b>Global ship monitoring using space-based AIS receivers</b> <i>Vu Trong Thu, Dao Van Thang, FPT University</i>
15:20 - 15:40	<b>Break</b>
15:40 - 17:00	<b>Regional Seminar Report (Venezuela, Egypt, Mexico, Spain, Kenya, Turkey, Lithuania, South Africa and others)</b> <i>Andres Arenas, Mohammed Argoun &amp; Mohammed Khalil Ibrahim, Esau Vicente Vivas &amp; Adan Espinoza Millan, Fernando Agelet, Rustem Aslan, Vidmantas Tomkus, Arno Barnard, Hector Bedon</i>
17:00 - 17:50	<b>Awards and Feedback from Reviewers</b>
17:50 - 18:00	<b>1st Day Closing</b>

## 2nd Day (March 15, Tuesday)

9:30 - 10:00	<p><b>Plenary 1 Current Status of Japanese Space Policy</b></p> <p><i>Hiroshi Yamakawa (Secretary-General, Strategic Headquarters for Space Policy, Cabinet Secretariat, Government of Japan)</i></p>
10:00 - 11:00	<p><b>Session 1 Innovative System Design and Operation</b></p> <hr/> <p>1-1 Requirements Analyses for Small-scale Spacecraft</p> <p><i>Atsuo Tuiki (JAXA)</i></p> <hr/> <p>1-2 OVERVIEW ON ADVANCED NANOSATELLITE DEVELOPMENT ACTIVITIES AT THE SPACE FLIGHT LABORATORY AT THE UNIVERSITY OF TORONTO</p> <p><i>Freddy Pranajaya (University of Toronto Institute for Aerospace Studies)</i></p> <hr/> <p>1-3 Initial Operations of Center for Nanosatellite Testing</p> <p><i>Mengu Cho (Kyushu Institute of Technology)</i></p>
11:00 - 11:20	<b>Break</b>
11:20 - 12:20	<p><b>Session 2 Launch Opportunities and Methods</b></p> <hr/> <p>2-1 NanoLauncher: Efficient Orbital Transport for Nanosatellites</p> <p><i>A.C. Charania (SpaceWorks Commercial)</i></p> <hr/> <p>2-2 The International Space Station as a Launch Platform for CubeSats to Study Space Weather</p> <p><i>Charles Sweson (Utah State University)</i></p> <hr/> <p>2-3 Space Flight Laboratory Launches</p> <p><i>Freddy Pranajaya (University of Toronto Institute for Aerospace Studies)</i></p>
12:20 - 13:40	<b>Lunch</b>
13:40 - 14:10	<b>Poster Session</b>
14:10 - 15:30	<p><b>Session 3 Advanced Technologies, Subsystems, and Sensors (1)</b></p> <hr/> <p>3-1 The AGPS-1 - A redundant GPS-Unit for nano-satellites</p>

	<p><i>Stephan Stoltz(Astro- und Feinwerktechnik Adlershof GmbH)</i></p> <p>3-2 Phased array antenna with excellent installation efficiency Phased array antenna with excellent installation efficiency in a multiple folding scheme for a micro satellite</p> <p><i>Tadashi Takano (Nihon University)</i></p> <p>3-3 Development of Synthetic Aperture Radar Sensor for Small Satellite</p> <p><i>Josaphat Tetuko Sri Sumantyo (Chiba University)</i></p> <p>3-4 Expansion of Low Cost COTS Base Camera for the Earth Observation Applications</p> <p><i>Shinichi Kimura (Tokyo University of Science)</i></p>
15:30 - 15:50	<b>Break</b>
15:50 - 17:10	<p><b>Session 3 Advanced Technologies, Subsystems, and Sensors (2)</b></p> <p>3-5 TSUBAME - Earth and Astronomical Observation Technology Demonstration Satellite and its Development Status</p> <p><i>Saburo Matsunaga (Tokyo Institute of Technology)</i></p> <p>3-6 Development of gamma-ray polarimeter aboard the nano-satellite TSUBAME</p> <p><i>Takahiro Enomoto (Tokyo Institute of Technology)</i></p> <p>3-7 Development of High Voltage Technology Demonstration Satellite, HORYU-2</p> <p><i>Hiroki Nishimura (Kyusyu institute of technology)</i></p> <p>3-8 Development of a 3Unit CubeSat for LEO Communication</p> <p><i>Rustem Aslan Alim(Istanbul Technical University)</i></p>
17:10 – 17:30	<b>Break</b>
17:30 - 18:00	<p><b>Plenary 2 Coordination of Satellite Networks</b></p> <p><i>Takefumi Sato (Ministry of Internal Affairs and Communication)</i></p>
18:00 - 18:10	<b>2nd Day Closing</b>

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18:30

**Reception**

## 3rd Day (March 16, Wednesday)

09:30 - 10:30	<p><b>Plenary 3 Philosophies for Small Satellites: the SSTL experience 1985-2011</b></p> <p>Martin Sweeting (SSTL)</p>
10:30 - 11:30	<p><b>Session 4 Existing Missions and Lesson Learned</b></p> <p>4-1 Capacity building in space technology development - the United Nations perspective <i>Werner Balogh (United Nations Office for Outer Space Affairs)</i></p> <p>4-2 Lessons learned form SPRITE-SAT and application to RISING-2 <i>Kazuya Yoshida (Tohoku University)</i></p> <p>4-3 Lessons Learned from ITUpSAT1 <i>Ertan Umit (Istanbul Technical University)</i></p>
11:30 - 12:50	<b>Lunch</b>
12:50 - 13:40	<b>Poster Session</b>
13:40 - 15:20	<p><b>Session 5 Novel Future Mission Concepts and Payloads</b></p> <p>5-1 WNI's challenge with shipping companies: satellites system against pirates in the western Indian ocean near Somalia <i>Masaya Yamamoto (Weathernews Inc.)</i></p> <p>5-2 Nano-satellite Constellation 4π Live picture of Space from LEO <i>Vadim Zakirov (P.R. China/Tsinghua University)</i></p> <p>5-3 Solar Power Satellite using Small Satellites <i>Nobuyuki Kaya (Kobe University)</i></p> <p>5-4 International scientific missions on a Japanese-lead micro satellite3 <i>Toshinori Kuwahara (Tohoku University)</i></p> <p>5-5 Lithuanian Nano-Satellite Project</p>

	<i>Domantas Brucas (Vilnius Gediminas Technical University)</i>
15:20 – 15:40	<b>Break</b>
15:40 - 16:40	<b>Plenary 4 CubeSat Evolution: Looking at the Future</b> <i>Jordi Puig-Suari (Cal Poly)</i>
16:40 - 17:00	<b>Break</b>
17:00 - 18:00	<b>Plenary 5 Introduction of ISO/TC20/SC14( Space systems and operations ) Activities</b> <i>Eishima Keiichiro(Mitsubishi Electric)</i>
18:00 - 18:30	<b>Closing</b>