

February 4th 2009 (1st Day)

From	Session / Title and Speaker
8:30	Registration open
9:30	<p>Opening session</p> <p>T. Takano, <i>Nihon University, Japan</i></p> <p>S. Ohmori, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p> <p>N. Okano, <i>Ministry of Internal Affairs and Communications (MIC), Japan</i></p> <p>Y. Nakamura, <i>Japan Aerospace Exploration Agency (JAXA), Japan</i></p>
10:10	Coffee break
<p>Plenary session I</p> <p>Chair: H. Kunimori, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p> <p>Co-chair: K. Ikebe, <i>NEC TOSHIBA Space Systems Ltd., Japan</i></p>	
10:20	<p>ICSOS2009-1</p> <p>Satellite communication: How high speed we should pursue</p> <p>Author(s): T. Iida, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p>
10:50	<p>ICSOS2009-2 (Invited)</p> <p>High data rate optical inter-satellite links</p> <p>Author(s): R. Lange, B. Smutny, <i>Tesat Spacecom, Germany</i>; R. Meyer, <i>Deutschen Zentrums für Luft- und Raumfahrt (DLR), Germany</i></p>
11:20	<p>ICSOS2009-3 (Invited)</p> <p>Coherent optical technologies for space communications</p> <p>Author(s): A. Seeds, M. Fice, <i>University College London, UK</i></p>
11:50	Lunch
<p>Plenary session II</p> <p>Chair: Y. Arimoto, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p> <p>Co-chair: S. Yamakawa, <i>Japan Aerospace Exploration Agency (JAXA), Japan</i></p>	
13:00	<p>ICSOS2009-4 (Invited)</p> <p>Planetary laser communications and precision ranging</p> <p>Author(s): H. Hemmati, <i>Jet Propulsion Laboratory (JPL), California Institute of Technology, USA</i></p>
13:30	<p>ICSOS2009-5 (Invited)</p> <p>Classical optical and quantum communications activities at ESA</p> <p>Author(s): J. Perdigues, Z. Sodnik, B. Furch, <i>European Space Agency (ESA), Netherlands</i></p>
14:00	<p>ICSOS2009-6 (Invited)</p> <p>Review of free space laser communications research and development at the US Naval Research Laboratory</p> <p>Author(s): L. M. Thomas, C. I. Moore, H. R. Burriss, <i>Naval research laboratory, USA</i></p>
14:30	Coffee break

Space laser communications technology	
Chair: H. Hemmati, <i>Jet Propulsion Laboratory, California Institute of Technology (JPL), USA</i>	
Co-chair: Y. Takayama, <i>National Institute of Information and Communications Technology (NICT), Japan</i>	
14:40	ICSOS2009-7 Interoperability among different optical communications systems in space laser communications Author(s): H. Kunimori, Y. Shoji, Y. Takayama, Y. Takayama, M. Toyoshima, <i>National Institute of Information and Communications Technology (NICT), Japan</i>
15:00	ICSOS2009-8 JAXA's challenges to optical communication technology: From OICETS to the future Author(s): S. Yamakawa, <i>Japan Aerospace Exploration Agency (JAXA), Japan</i>
15:20	ICSOS2009-9 (Invited) Qualifying optical inter-satellite links for atmospheric occultations Author(s): N. Perlot, <i>Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany</i> ; V. Sofieva, <i>Finnish Meteorological Institute (FMI), Finland</i>
15:50	Poster session
17:00	1st day end
18:00	Reception - Award Ceremony
	Grand Pacific Le DAIBA

Poster Session

ICSOS2009-26
An estimation of an inversion / non-inversion dynamic optically reconfigurable gate array VLSI
Author(s): S. Kato, M. Watanabe, <i>Shizuoka University, Japan</i>
ICSOS2009-27
Triple-module redundancy for an optically reconfigurable gate array
Author(s): D. Seto, M. Watanabe, <i>Shizuoka University, Japan</i>
ICSOS2009-28
Development of 6Gbps digital coherent receiver
Author(s): M. Morimoto, M. Abe, T. Tanaka, <i>Nippon Control Systems, Japan</i> ; M. Toyoshima, Y. Shoji, K. Kikuchi, <i>National Institute of Information and Communications Technology (NICT), Japan</i>
ICSOS2009-29
Development of LDPC codes by the gallager composition method on FPGA
Author(s): T. Tanaka, M. Abe, M. Morimoto, <i>Nippon Control System Corporation (NCSC), Japan</i> ; Y. Kadoike, E. Okamoto, <i>Nagoya Institute of Technology (NIT), Japan</i> ; Y. Shoji, M. Toyoshima, <i>National Institute of Information and Communications Technology (NICT), Japan</i>
ICSOS2009-30
The development of two-axes fast steering mirror and high efficiency driver
Author(s): T. Abe, T. Kizaki, <i>Spacelink Co., Japan</i> ; H. Kunimori, Y. Takayama, M. Toyoshima, <i>National Institute of Information and Communications Technology (NICT), Japan</i>
ICSOS2009-31
Spatial division and time division multiple access system based on intensity distribution for hybrid-LOS indoor optical wireless communication
Author(s): K. Kawamoto, S. Miyamoto, S. Sampei, <i>Osaka University, Japan</i>
ICSOS2009-32
Link budget analysis for optical intersatellite communication system with double phase conjugate mirror
Author(s): K. Shimayabu, A. Okamoto, M. Kitano, <i>Hokkaido University, Japan</i> ; Y. Takayama, <i>National Institute of Information and Communications Technology (NICT), Japan</i>
ICSOS2009-33
Performance evaluation of WLAN signal transmission by using a new statistical model of RoFSO Channel
Author(s): K-H. Kim, T. Higasino, T. Nakamura, Y. Aburakawa, K. Tsukamoto, S. Komaki, <i>Osaka University, Japan</i> ; K. Wakamori, T. Suzuki, K. Kazaura, M. S. Alam, K. Takahashi, K. Ohmae, T. Satou, M. Matsumoto, <i>Waseda University, Japan</i>

ICSOS2009-34
<p>Coherent 2-micron lidar systems for CO₂ and wind observations</p> <p>Author(s): K. Mizutani, S. Ishii, T. Itabe, T. Aoki, <i>National Institute of Information and Communications Technology (NICT), Japan</i>; A. Sato, K. Asai, <i>Tohoku Institute of Technology, Japan</i>; H. Fukuoka, <i>Hamamatsu Photonics K.K, Japan</i>; T. Ishikawa, <i>Nippon Aleph Co., Japan</i></p>
ICSOS2009-35
<p>Transportable three-axis telescope for satellite-ground laser communications</p> <p>Author(s): Y. Takayama, N. Miyashita, M. Toyoshima, Y. Shoji, H. Kunimori, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p>
ICSOS2009-36
<p>Angle of arrival fluctuation in ground-to-satellite laser communication links</p> <p>Author(s): H. Takenaka, <i>The University of Electro-Communications, Japan</i>; C. Schaefer, M. Toyoshima, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p>
ICSOS2009-37
<p>Optical amplifiers for space environment</p> <p>Author(s): Y. Koyama, H. Kunimori, Y. Takayama, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p>
ICSOS2009-38
<p>Applications and demonstration of microwave environment transport over digital free space optical network</p> <p>Author(s): Y. Shoji, Y. Takayama, M. Toyoshima, H. Kunimori, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p>
ICSOS2009-39
<p>Free-space quantum key distribution for mobile terminals</p> <p>Author(s): M. Toyoshima, H. Takenaka, C. Shaefer, Y. Shoji, Y. Takayama, H. Kunimori, M. Takeoka, M. Fujiwara, M. Sasaki, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p>
ICSOS2009-40
<p>A proposed laser diode with MEMS light-wave antenna for wireless laser communication</p> <p>Author(s): Y. Munemasa, <i>Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency (JAXA), Japan</i>; M. Sano, <i>Tokyo University of Science, Japan</i></p>
ICSOS2009-41
<p>LDPC code design for OICETS experiments in 2008</p> <p>Author(s): Y. Kadoike, E. Okamoto, Y. Iwanami, <i>Nagoya Institute of Technology, Japan</i>; Y. Shoji,</p>

February 5th 2009 (2nd Day)

From	Session / Title and Speaker
8:30	Registration open
Developments in laboratory Chair: R. Lange, <i>Tesat Spacecom, Germany</i> Co-chair: M. Toyoshima, <i>National Institute of Information and Communications Technology (NICT), Japan</i>	
8:50	ICSOS2009-10 Technology and application of laser communication for Earth observation micro-satellite "TAIKI" Author(s): Y. Aoyanagi, S. Satori, <i>Hokkaido Institute of technology, Japan</i>
9:10	ICSOS2009-11 Data-relay network using laser inter-satellite communications Author(s): I. Mase, K. Ikebe, <i>NEC Corporation, Japan</i> ; K. Shiratama, <i>NEC TOSHIBA Space Systems, Ltd., Japan</i>
9:30	ICSOS2009-12 Development of optical antenna for satellite-ground link Author(s): K. Kodeki, K. Fukushima, <i>Mitsubishi Electric Corporation, Japan</i> ; M. Toyoshima, Y. Takayama, <i>National Institute of Information and Communications Technology (NICT), Japan</i>
9:50	Coffee break
Experimental demonstration Chair: L. Summerer, <i>European Space Agency (ESA), Netherlands</i> Co-chair: T. Toda, <i>Institute of Space and Astronautical Science (ISAS) / Japan Aerospace Exploration Agency (JAXA), Japan</i>	
10:00	ICSOS2009-13 (Invited) Experimental demonstration of optical telemetry transmission from Mars to Earth Author(s): K. Kudielka, T. Dreischer, B. Thieme, M. Tuechler, <i>Oerlikon Space, Switzerland</i>
10:30	ICSOS2009-14 Experimental study of transmitting RF signals over free space optics system Author(s): A. Bekkali, P. Tien Dat, K. Kazaura, K. Wakamori, T. Suzuki, M. Matsumotoi, <i>Waseda University, Japan</i> ; T. Higashino, K. Tsukamoto, S. Komaki, <i>Osaka University, Japan</i>
10:50	ICSOS2009-15 Demonstrative radio on free space optic transmission experiment and its optimal link design Author(s): H. Onodera, K. Kim, T. Higashino, K. Tsukamoto, S. Komaki, <i>Osaka University, Japan</i> ; K. Wakamori, T. Suzuki, K. Kazaura, M. Matsumoto, <i>Waseda University, Japan</i>
11:10	Coffee break

<p>Quantum technology for space applications and science mission Chari: J. Perdigues, <i>European Space Agency (ESA), Netherlands</i> Co-chair: N. Hiromoto, <i>Shizuoka University, Japan</i></p>	
11:20	ICSOS2009-16 (Invited) Space-QUEST: Experiments with quantum entanglement in space Author(s): R. Ursin, T. Jennewein, <i>Institute for Quantum Optics and Quantum Information (IQOQI), Austrian Academy of Sciences, Austria</i> ; A. Zeilinger, <i>University of Vienna, Austria</i>
11:50	ICSOS2009-17 Quantum receivers and quantum coding toward the quantum-limit performance in long-haul optical communications Author(s): M. Takeoka, K. Tsujino, M. Fujiwara, M. Sasaki, M. Toyoshima, <i>National Institute of Information and Communications Technology (NICT), Japan</i>
12:10	ICSOS2009-42 Japanese space gravitational wave antenna DECIGO Author(s): S. Kawamura, <i>National Astronomical Observatory, Japan</i>
12:30	Lunch
<p>Novel optical devices Chair: A. Seeds, <i>University College London, UK</i> Co-chair: Y. Shoji, <i>National Institute of Information and Communications Technology (NICT), Japan</i></p>	
13:30	ICSOS2009-18 (Invited) Concepts for based on wireless energy transmission via laser Author(s): L. Summerer, O. Purcell, <i>European Space Agency (ESA), Netherlands</i>
14:00	ICSOS2009-19 Vehicle to vehicle multi-channel optical communication system by laser using corner cube prism with total reflection technique Author(s): T. Tsumura, <i>Tsumura Research Institute Co. Japan</i> ; Hisao Azuma, <i>FUDAI Inc., Japan</i> ,
14:20	ICSOS2009-20 Innovative concept of optical system design for satellites Author(s): A. Enokuchi, Y. Obuchi, Y. Kanai, N. Takeyama, <i>Genesis Corporation, Japan</i>
14:40	ICSOS2009-21 Configuration experiments for an optically reconfigurable gate array with a silver-halide holographic memory Author(s): M. Nakajima, M. Watanabe, <i>Shizuoka University, Japan</i>
15:00	ICSOS2009-22 Study on on-orbit self-compensation of satellite optics using spatial light modulator Author(s): N. Miyamura, <i>University of Tokyo, Japan</i>
15:20	Coffee break

Space lidar technology		
Chair: L. Thomas, <i>Naval research laboratory, USA</i>		
Co-chair: K. Mizutani, <i>National Institute of Information and Communications Technology (NICT), Japan</i>		
15:30	ICSOS2009-23 (Invited) The first lunar global topography by the laser altimeter (LALT) on the KAGUYA (SELENE) main orbiter Author(s): H. Araki, S. Tazawa, H. Noda, Y. Ishihara, N. Kawano, S. Sasaki, <i>National Astronomical Observatory, Japan</i>	
16:00	ICSOS2009-24 On orbit operation of lidar for asteroid Explore HAYABUSA Author(s): T. Mizuno, <i>Institute of Space and Astronautical Science (ISAS) / Aerospace Exploration Agency (JAXA), Japan</i> ; K. Tsuno, E. Okumura, <i>NEC TOSHIBA Space Systems Ltd., Japan</i> ; M. Nakayama, <i>TOSHIBA Corporation, Japan</i>	
16:20	ICSOS2009-25 Spaceborne lidar for the JEM-EUSO mission Author(s): S. Wada, T. Ogawa, T. Ebisuzaki, <i>RIKEN, Japan</i> ; M. Sato, <i>Hokkaido University, Japan</i>	
16:40	Concluding remarks	N. Kadowaki, <i>National Institute of Information and Communications Technology (NICT), Japan</i>
16:50	2nd day end	