

**February 4th 2009 (1st Day)**

From	Session / Title and Speaker
8:30	Registration open
9:30	<p><b>Opening session</b></p> <p>T. Takano, <i>Nihon University, Japan</i>  S. Ohmori, <i>National Institute of Information and Communications Technology (NICT), Japan</i>  N. Okano, <i>Ministry of Internal Affairs and Communications (MIC), Japan</i>  Y. Nakamura, <i>Japan Aerospace Exploration Agency (JAXA), Japan</i></p>
10:10	Coffee break
<b>Plenary session I</b>	
	Chair: H. Kunimori, <i>National Institute of Information and Communications Technology (NICT), Japan</i> Co-chair: K. Ikebe, <i>NEC TOSHIBA Space Systems Ltd., Japan</i>
10:20	<p>ICSOS2009-1</p> <p><b>Satellite communication: How high speed we should pursue</b></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><b>High data rate optical inter-satellite links</b></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><b>Coherent optical technologies for space communications</b></p> <p>Author(s): A. Seeds, M. Fice, <i>University College London, UK</i></p>
11:50	Lunch
<b>Plenary session II</b>	
	Chair: Y. Arimoto, <i>National Institute of Information and Communications Technology (NICT), Japan</i> Co-chair: S. Yamakawa, <i>Japan Aerospace Exploration Agency (JAXA), Japan</i>
13:00	<p>ICSOS2009-4 (Invited)</p> <p><b>Planetary laser communications and precision ranging</b></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><b>Classical optical and quantum communications activities at ESA</b></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><b>Review of free space laser communications research and development at the US Naval Research Laboratory</b></p> <p>Author(s): L. M. Thomas, C. I. Moore, H. R. Burris, <i>Naval research laboratory, USA</i></p>
14:30	Coffee break

## Space laser communications technology

Chair: H. Hemmati, *Jet Propulsion Laboratory, California Institute of Technology (JPL), USA*

Co-chair: Y. Takayama, *National Institute of Information and Communications Technology (NICT), Japan*

	ICSOS2009-7	
14:40	<b>Interoperability among different optical communications systems in space laser communications</b> 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 <b>JAXA's challenges to optical communication technology: From OICETS to the future</b> Author(s): S. Yamakawa, <i>Japan Aerospace Exploration Agency (JAXA), Japan</i>	
15:20	ICSOS2009-9 (Invited) <b>Qualifying optical inter-satellite links for atmospheric occultations</b> 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	<b>An estimation of an inversion / non-inversion dynamic optically reconfigurable gate array VLSI</b> Author(s): S. Kato, M. Watanabe, <i>Shizuoka University, Japan</i>
ICSOS2009-27	<b>Triple-module redundancy for an optically reconfigurable gate array</b> Author(s): D. Seto, M. Watanabe, <i>Shizuoka University, Japan</i>
ICSOS2009-28	<b>Development of 6Gbps digital coherent receiver</b> 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	<b>Development of LDPC codes by the gallager composition method on FPGA</b> 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	<b>The development of two-axes fast steering mirror and high efficiency driver</b> 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	<b>Spatial division and time division multiple access system based on intensity distribution for hybrid-LOS indoor optical wireless communication</b> Author(s): K. Kawamoto, S. Miyamoto, S. Sampei, <i>Osaka University, Japan</i>
ICSOS2009-32	<b>Link budget analysis for optical intersatellite communication system with double phase conjugate mirror</b> 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	<b>Performance evaluation of WLAN signal transmission by using a new statistical model of RoFSO Channel</b> Author(s): K-H. Kim, T. Higashino, 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

**Coherent 2-micron lidar systems for CO<sub>2</sub> and wind observations**

Author(s): K. Mizutani, S. Ishii, T. Itabe, T. Aoki, *National Institute of Information and Communications Technology (NICT), Japan*; A. Sato, K. Asai, *Tohoku Institute of Technology, Japan*; H. Fukuoka, *Hamamatsu Photonics K.K, Japan*; T. Ishikawa, *Nippon Aleph Co., Japan*

ICSOS2009-35

**Transportable three-axis telescope for satellite-ground laser communications**

Author(s): Y. Takayama, N. Miyashita, M. Toyoshima, Y. Shoji, H. Kunimori, *National Institute of Information and Communications Technology (NICT), Japan*

ICSOS2009-36

**Angle of arrival fluctuation in ground-to-satellite laser communication links**

Author(s): H. Takenaka, *The University of Electro-Communications, Japan*; C. Schaefer, M. Toyoshima, *National Institute of Information and Communications Technology (NICT), Japan*

ICSOS2009-37

**Optical amplifiers for space environment**

Author(s): Y. Koyama, H. Kunimori, Y. Takayama, *National Institute of Information and Communications Technology (NICT), Japan*

ICSOS2009-38

**Applications and demonstration of microwave environment transport over digital free space optical network**

Author(s): Y. Shoji, Y. Takayama, M. Toyoshima, H. Kunimori, *National Institute of Information and Communications Technology (NICT), Japan*

ICSOS2009-39

**Free-space quantum key distribution for mobile terminals**

Author(s): M. Toyoshima, H. Takenaka, C. Schaefer, Y. Shoji, Y. Takayama, H. Kunimori, M. Takeoka, M. Fujiwara, M. Sasaki, *National Institute of Information and Communications Technology (NICT), Japan*

ICSOS2009-40

**A proposed laser diode with MEMS light-wave antenna for wireless laser communication**

Author(s): Y. Munemasa, *Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency (JAXA), Japan*; M. Sano, *Tokyo University of Science, Japan*

ICSOS2009-41

**LDPC code design for OICETS experiments in 2008**

Author(s): Y. Kadoike, E. Okamoto, Y. Iwanami, *Nagoya Institute of Technology, Japan*; Y. Shoji,