

Optical Comb, Inc. Newly Formed Advisory Board

Made up of 8 experts from Japan and abroad and public workshop for development and business recommendations.

1. Contents

Tokyo, JANUARY 22, 2007 -- Optical Comb, Inc. (Head office: Meguro-Ku, Tokyo. President: Tsuyoshi Asaeda) has set up a new 'advisory board', made up of experts from Japan and abroad, in order to take enquiries and suggestions regarding the development of new industries and markets aimed at the expansion of the anticipated optical comb technique as a next generation laser. This document contains details regarding board members as well as objectives and contents of activities.

1) The aim of the Advisory Board

To take opinions and proposals regarding the development of technology and products utilizing the optical comb. To reflect on the business judgments and product expansion of Optical Comb, Inc. and to make a contribution towards education for the progress of the optical comb and promotion of it's utilization in new markets and industries.

2) Main activities

- A two day workshop is to be held by advisory board members every year. It includes two sessions to be attended only by in-house persons and for persons invited from outside the company and members of the public.
- During the in-house member discussions, opinions regarding company business expansion and policy will be heard in discussions on company technology development, product development and market forces.
- The sessions for invited persons and members of the public are aimed at exchanging information regarding the utilization of the optical comb technique.

3) Advisory Board Members

John L. Hall, Ph.D.	CTO of Hall Stable Lasers, LLC
Theodor W. Hänsch, Ph.D.	Director, Max-Planck Institute for Quantum Optics
Dr. Masafumi Koga	Professor of Department of Electrical and Electronic Engineering, Faculty of Engineering, Oita University
Dr. Hirokazu Matsumoto	Deputy Director, Head, Lengths and Dimensions Division, National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology (AIST)
Dr. Ken'ichi Nakagawa	Associate professor, Institute for Laser Science, University of Electro-communications
Dr. Yoshizumi Yasuoka	Professor Emeritus, National Defense Academy of Japan. Guest Professor, University of Fukui
Dr. Junji Yumoto	Director, NTT Basic Research Laboratories
Xi-Cheng Zhang, Ph.D.	Erik Jonsson Chair Professor of Science - Rensselaer Polytechnic Institute. Director – Center for Terahertz Research

(Shown in alphabetic order, with title and background after)

2. Enquiries on the subject

Dr. Shigenori Matsui

Corporate Planning & Management, Optical Comb, Inc.

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3. Corporate Profile

Registered Name: Optical Comb, Inc.

Location of Headquarters: Tokyo Institute of Technology, Incubation Center R204, 2-12-1, O-okayama, Meguro-ku, Tokyo, 152-8550 JAPAN

Tel +81-3-5734-2337 Fax +81-3-5734-2327 URL: <http://www.optocomb.com>

Date Established: April 1, 2002 Capital: 184,900,000 yen

Representative: President Dr. Tsuyoshi Asaeda

Brief History: Optical Comb, Inc. (formerly Optical Comb Institute, Inc.) was established in 2002 as a venture business of Tokyo Institute of Technology for the purpose of developing a variety of products and technologies based on high precision control of optical frequency. Optical Comb, Inc. has an ample experience as a product/service provider for Japanese public and private research institutions.

4. Advisory Board Members background details



John L. Hall, Ph.D.

CTO of Hall Stable Lasers, LLC

After receiving his doctorate from Carnegie Institute of Technology in 1961, he worked at the National Bureau of Standards (NBS - now known as NIST) between 1962 and 1971. From 1964 he carried out research at the Joint Institute for Laboratory Astrophysics (JILA). He has been teaching in the Physics Department, University of Colorado since 1967 and has been a senior scientist at the National Institute of Standards and Technology since 1971. In 2005 he received the Nobel Prize for Physics for contributions to the development of laser-based precision spectroscopy, including the optical comb technique. Currently he started up Hall

Stable Lasers, LLC and work as a consultant.

Other awards: Department of Commerce Gold Medal (1969 and others). 1988 Davisson-Germer Prize of the American Physical Society. 1991 Frederic Ives Medal of the Optical Society of America. 2000 Allen V. Astin Measurement Science Award (NIST). 2002 Max Born Award of the Optical Society of America. Others. Many published papers.



Theodor W. Hänsch, Ph.D.

Director of Max-Planck Institute for Quantum Optics

1969 - Received Doctorate from University of Heidelberg.

1970 - Continued post-doctorate research as a member of Stanford University under Professor Arthur L. Schawlow (winner of 1981 Nobel Prize for Physics) and accepted a position as professor in the physics department at Stanford in 1975.

1986 - Returned to Germany and worked as professor at both Max-Planck Institute for Quantum Optics and Ludwig-Maximilians University of Munich.

2005 - Received the Nobel Prize for physics for contributions to the development of laser-based precision spectroscopy, including the optical comb technique.

Other awards: 1989 Gottfried Wilhelm Leibniz Prize (German Science Foundation). 2005 Otto Hahn award (German Physical Society). Others. Many published papers.



Dr. Masafumi Koga

Professor of Department of Electrical and Electronic Engineering, Faculty of Engineering, Oita University

Received Doctorate in Engineering from Osaka University in 1993 (1983 - Completed Masters in Electronic Engineering at Kyushu Institute of Technology). 1983 - Entered NTT Corporation. Developed ISDN user-network interface, and researched into optical signal processing. During the research, high-performance optical circulator, which has been used world wide, was invented. 1994 - R&D into photonic network systems. 2001 - Group leader, photonic transport systems research group. July 2005 - Project Manager, promotion project

No.1, NTT Network Innovation Laboratories. September 2006 - Retired from NTT. October 2006 - Current position.

Awards: 2000 - The Institute of Electronics, Information and Communication and Engineers (IEICE) Achievement Award. 2001 - NTT presidential Award. Affiliated societies: IEEE, IEICE member (Coordinator of 2001 - 2002 fiber-optic communication system study group (OCS))



Dr. Hirokazu Matsumoto

Deputy Director, Head, Lengths and Dimensions Division, National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology (AIST)

Completed doctorate in School of Engineering, University of Tokyo. Doctorate of Engineering. 1976 - Joined the Mechanical Engineering Laboratory No.1 optical measurement section. 1981 - Became chief scientist. 1989 - Became laboratory manager. During this time (1983-1984), was registered as a visiting researcher at the National Bureau of Standards (NBS). 1991-1995 Part-time instrumentation engineering lecturer,

Measurement Engineering, Engineering Laboratory, Kobe University. 1991 - 1996 - Member of Kawauchi Project Promotion committee, New Technology Corporation. 1995 - Research coordinator, New Technology Corporation. 1997- Quantum department manager New Technology Corporation. 1999 - Affiliate professor of Tokyo University of Science graduate school. April 2001 - Current position. From 1994 - Measurement law JCSS system technology review committee member as government delegate. From 2005 - Chairman of industrial technique association mechanism foundation department. Numerous other engagements.

Awards: 1984 - JSPE Award. 1988 - Department of Trade and Industry outstanding achievement award. 1993 - JSPE Numata Memorial Prize Affiliated societies: Japan Society for Precision Engineers. Institute of Electrical Engineers. Optical Society of Japan. Japan Society of Applied Physics. Others.



Dr. Ken'ichi Nakagawa

Associate professor - Institute for Laser Science, University of Electro-communications

1984 - Graduated from University of Tokyo, School of Science (Physics).

1989 - Completed Doctorate in Science related studies from University of Tokyo Graduate School. Doctorate of Science. Assistant at Tokyo Institute of Technology Interdisciplinary School of Science and lecturer at Tokyo Polytechnic University. 1998 - Associate professor at the Institute for Laser Science, University of Electro-communications. Pursued research into neutral atom laser cooling and Bose-Einstein Condensation

Awards: Japan Society of Applied Physics, Optical and Quantum Electronic Achievement Award. Associated Societies: The Physical Society of Japan, The Japan Society of Applied Physics, OSA, member of the Laser Society of Japan.



Dr. Yoshizumi Yasuoka

Professor Emeritus, National Defense Academy of Japan. Guest Professor, University of Fukui

1969 - Completed Doctorate from Tohoku University Graduate School. Doctorate of Engineering. 1969 - Entered Technical Research and Development Institute, Japan. 1973 - Lecturer, National Defense Academy. 1975 - Associate Professor. 1977 - 1978 Visiting Researcher, University of California, Berkeley. 1980 - Professor, National Defense Academy. 2000 - Director of Academic Department. 2002 - Vice President. 2004 - Retired. Currently - Professor Emeritus, National Defense Academy. Guest Professor, University of Fukui.

Research into infrared sensing devices, thin film antennas, millimeter and terahertz wave detectors, high-Tc superconductor, microfabrication technique etc. Chair of Steering Committee of Terahertz Technology Forum. Vice chairman of specialist committee for Terahertz Research and Development related to physical and life sciences, Japan Society for the Promotion of Science. President of The Japan Society for Infrared Science and Technology (currently Advisor). Member of the Institute of Electronics, Information and Communication Engineers, the Japan Society for Applied Physics and the Laser Society of Japan.



Dr. Junji Yumoto

Director, NTT Basic Research Laboratories

March 1984 - received Dr. degree from Keio University. April 1984 - joined Musashino Electrical Communication Laboratories, Nippon Telegram and Telephone Public Corporation (now NTT). Research into optical propagation properties in nonlinear optical media, coherent transient in low-dimensional semiconductor. 1992 to 1993 - Visiting researcher in Optical Sciences Center, University of Arizona. 2001 - Executive Manager, Advanced Opto-electronics Laboratory, NTT Photonics Laboratories. 2004 - Engineering Director, NTT Electronics Corporation to incubate compact solid-state laser business using quasi-phase-matched LiNbO₃ waveguides. April, 2006 - Director, NTT Basic Research Laboratories.



Xi-Cheng Zhang, Ph.D.

Erik Jonsson Chair Professor of Science - Rensselaer Polytechnic Institute. Director – Center for Terahertz Research

1982 - Graduated from Beijing University (Received Doctorate from Brown University in 1986). Researcher, Massachusetts Institute of Technology (1984 - 1985). Researcher, Amoco Research Center (1985 - 1987). Researcher, Columbia University (1987 - 1991). 1992 – Associate professor at Rensselaer Polytechnic Institute, Department of Physics, Applied Physics and Astronomy. 1997 - Full professor at Rensselaer Polytechnic Institute.

Dr. Zhang is also a professor at the Department of Electrical, Computer and System Engineering at Rensselaer Polytechnic Institute (1998 -), He was named as Erik Jonsson Chair Professor of Science in 2001. From July 2002 – Dr. Zhang became the Funding Director at the Center for Terahertz Research at Rensselaer. From October 2005 – Dr. Zhang served as Chairman of NATO SET Terahertz Exploratory Team. He also holds professorship at several universities and the Chinese Academy of Sciences.