

Biography and Past Lectures

Prof. Ken-ichi Sato



Ken-ichi Sato (M'87-SM'95-F'99-LF'21) received his B.S., M.S., and Ph.D. degrees in electronics engineering from the University of Tokyo, in 1976, 1978, and 1986, respectively. He is a Professor Emeritus at the Graduate School of Engineering, Nagoya University, an NTT R&D Fellow, and with National Institute of Advanced Industrial Science and Technology (AIST) since 2019.

Before joining the Nagoya University in April 2004, he was an Executive Manager of the Photonic Transport Network Laboratory at NTT. He has been a leading researcher in the field of telecommunications; his most significant achievements lie in two of the important transport network technology developments. One is ATM (Asynchronous Transfer Mode) network technology, which includes the invention of the Virtual Path concept. The other is photonic network technology, which includes the invention of the optical path concept and various networking and system technologies. His R&D activities cover transport network architectures, network design, photonic network systems including optical cross-connect/ADM and photonic IP routers, and optical transmission technologies. He has authored/co-authored more than 550 research publications in international journals and conferences. He holds 60 granted patents. His contributions to ATM and optical network technology development extend to coediting the IEEE Journal on Selected Areas in Communications (five special issues) and the Journal of Lightwave Technology (three special issue); organizing several workshops and conference technical sessions; serving on numerous committees of international conferences including OFC 2016 General Chair and OFC 2014 Program Chair; authoring a book, *Advances in Transport Network Technologies* (Artech House, 1996) and coauthoring 14 other books.

Prof. Sato is an Honorary Member and a Fellow of the Institute of Electronics, Information and Communication Engineers (IEICE) of Japan and a Life Fellow of the IEEE. He served as the president of the IEICE during 2016-2017. He received the Young Engineer Award in 1984, the Excellent Paper Award in 1991, the Achievement Award in 2000, and the Distinguished Achievement and Contributions Award in 2011 from the IEICE of Japan, and the Best Paper Awards in 2007, 2008, and 2020 from the IEICE Communications Society. He received Outstanding Technical Achievement Award from the IEEE Communications Society in 2017, and numerous best paper awards at international conferences including OECC/PS 2016, SPIE Photonics West 2018, IEEE ICP 2016, CLEO-PR & OECC/PS 2013, and ONDM 2009. He was also the recipient of the Distinguished Achievement Award of the Ministry of Education, Science and Culture in 2002, and the Medal of Honor with Purple Ribbon from Japan's Cabinet Office in 2014.

Tutorial lecture

- ◆ July 2013, OECC 2013, Kyoto, Japan, July 3, 2013.
- ◆ July 2012, OECC 2012, Busan, Korea, July, 2012.
- ◆ September 2008, ECOC 2008, We.3.A.1, Brussels.
- ◆ November 2004, APOC 2004 (Asia-Pacific Optical Communications Conference), Beijing, China.
- ◆ October 2003, The 7th Asia-Pacific Network Operations and Management Symposium, APNOMS 2003, Tutorial 5: Photonic Networks.
- ◆ May 1996, "Optoelectronics Research in Japan and the U.S." Seminar, Stanford University US-Japan Technology Management Center.
- ◆ July 1996, the First Optoelectronics and Communications Conference '96 (OECC '96), 18A2 (Tutorial-2).
- ◆ March 1995, the 2nd Asia-Pacific Conference on Communications, APCC '95, Osaka, Japan, June 13-16, 1995.
- ◆ March 2023, OFC 2023, San Diego, Optical Switching will Innovate Intra Data Center Network.
- ◆ K. Sato, "Prospects and Challenges of Optical Switching Technologies for Intra Data Center Networks," The 5th International Conference on Telecommunications and Communication Engineering (ICTCE 2022), November 29, 2022.

Plenary/Keynote speech at International Conferences

- ◆ Ken-ichi Sato, "Role of Optical Technologies to Compensate the End of Moore's Law," The 2nd World Symposium on Communication Engineering (WSCE 2019), December 18-20, 2019, Nagoya.
- ◆ K. Sato, "How optical technologies can compensate the imminent demise of Moore's law?" 2016 IEEE 17th International Conference on High Performance Switching and Routing (HPSR 2016), Yokohama, June 14-17, 2016.
- ◆ K. Sato, "How Can Optical Technologies Compensate the Imminent Demise of Moore's Law?" 2015 IEIE Fall Conference, November 27-28, 2015, Oak Valley, Wonju-si, Korea.
- ◆ K. Sato, "Development of large capacity future optical networks," 10th International Workshop on Optical Signal Processing and Optical Switching, IWOOS 2015, Beijing, China, November 15-17, 2015.
- ◆ K. Sato, "Role and opportunities of photonics in future networks," IEEE Photonics Society Winter Topicals 2010, **Keynote**, MC1.1, Majorca, Spain, January 11-13, 2010.
- ◆ **K. Sato**, "The path to energy efficient optical networking," Photonics in Switching 2010, Plenary/Invited, JTUA2, Monterey, California, July 25-28, 2010.
- ◆ K. Sato, "Optical technologies that enable Green networks," 12th International Conference on Transparent Optical Networks, ICTON 2010, Mo.A.2, Munich, June 27-July 1, 2010.
- ◆ K. Sato, "Recent Developments in and Challenges of Photonic Networking Technologies," Plenary of COIN-ACOFI International Conference 2007, Melbourne, Australia, June 24-27, 2007.
- ◆ K. Sato, "Advances and challenges of photonic networking technologies," Plenary of International Conference on Photonics in Switching 2006, Herakleion (Crete), Greece, October 16-18, 2006.
- ◆ K. Sato, "Advances and challenges of IP plus photonic networks," OpticsEast 2006(ITCom2006), Boston, October 2-4, 2006.
- ◆ K. Sato, "Broadband Access and its Impact on Future Networks," OpticsEast2005(ITCom2005), Boston, Plenary Session, November 23-25, 2005.
- ◆ K. Sato, "The optical path to the future networks," Conference on Optoelectronics and Optical Communications, COOC 2004, Plenary talk, Daejeon, Korea, May 12-14, 2004.

Invited Presentation at International Conferences/Workshops

- ◆ More than 100