Pioneering the Future: The IOWN Initiative and its Enabler Photonics-Centered Technologies

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Abstract
Technological advances, such as those in information and communication technology and artificial intelligence, have undoubtedly enriched our lives by providing greater convenience and comfort. To ensure the realization of a safe, secure, and prosperous society, it is essential to develop technologies that are in harmony with the Earth. In 2019, NTT announced the IOWN (Innovative Optical and Wireless Network) initiative, which aims to establish an environmentally friendly communications platform that promotes sustainable growth, maximizes diversity, and optimizes the whole. Photonics technology is positioned as the core technology for realizing the IOWN concept. In my talk, I will introduce the photonics-centered technologies that NTT is working on. These include high-speed, large-capacity optical transmission technology to meet continuously and drastically increasing data traffic; photonics-electronics convergence technology for highly efficient, low-power consumption information processing; and photonics devices for vision applications and optical quantum computing.

References

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