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Special Report

Commemorating the Award of the 2025 IEEE Jagadish Chandra Bose Medal in Wireless Communications

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Special Report

Commemorating the Award of the 2025 IEEE Jagadish Chandra Bose Medal in Wireless Communications

Pursuing the Essence of Technology Thoroughly. Passion Is Something You Can Only Pour into What You Love

▼ Abstract

Seizo Onoe, former chief standardization strategy officer of NTT and current director of the Telecommunication Standardization Bureau, International Telecommunication Union (ITU), has been awarded the 2025 IEEE Jagadish Chandra Bose Medal in Wireless Communications by the Institute of Electrical and Electronics Engineers (IEEE). As one of 21 IEEE Medals awarded in different fields, this award was established in 2025 as the award second only to the highest award, the IEEE Medal of Honor. To commemorate this award, we spoke with Mr. Onoe, who proposed the concept of Long-Term Evolution (LTE)—a key technology for 4G (4th generation of mobile communication systems)—and considered “the father of LTE,” about his thoughts on receiving the award and evolution and standardization of mobile communication systems.

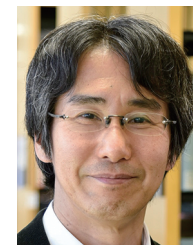


Front-line Researchers

Hiroki Takesue, Senior Distinguished Researcher, NTT Basic Research Laboratories

▼ Abstract

Solving a combinatorial optimization problem involves finding an optimal combination among a large number of options, and when the number of options becomes large, it becomes difficult to solve even with modern digital computers. We spoke with Hiroki Takesue, a senior distinguished researcher at NTT Basic Research Laboratories, who is exploring the “coherent Ising machine,” a photonic computer that uses a network of optical oscillators to solve a combinatorial optimization problem. He is also studying the “quantum internet” by creating the world’s first three-photon entangled state based on time-bin qubits. We asked him about his current efforts and thoughts on his research approach of working hard on site and getting outside once in a while.



Global Standardization Activities

Latest Standardization in OpenROADM MSA

▼ Abstract

The OpenROADM Multi-Source Agreement (MSA) is promoting the specification of optical interface standards at the physical layer and control APIs (application programming interfaces) for equipment controllers to enable multi-vendor interoperable reconfigurable optical add/drop multiplexer (ROADM) networks in the domain of metro and long-haul wavelength-division multiplexing optical transport networks. This article introduces an overview of the standards defined by the OpenROADM MSA and its latest activities.

