



Front-line Researchers

- Sousuke Imamura, Senior Distinguished Researcher, NTT Space Environment and Energy Laboratories

Rising Researchers

- Yusuke Ijima, Distinguished Researcher, NTT Human Informatics Laboratories

Feature Articles

Research and Development for NTT C89: NTT Group's Space Business

- Improving Mobile Communication Service Quality Using Non-terrestrial Networks
- AI Inference Technology toward a Space Datacenter
- Power Transmission Technology Using Electric Field Surface Waves—Future Energy Infrastructure Expanding into Space

Global Standardization Activities

- Report on World Telecommunication Standardization Assembly (WTSA-24)

External Awards

Front-line Researchers

Sousuke Imamura, Senior Distinguished Researcher, NTT Space Environment and Energy Laboratories

▼ Abstract

In September 2021, NTT formulated a new environment and energy vision called "NTT Green Innovation toward 2040" and announced that "NTT Group aims to achieve carbon neutrality by 2040." This new environment and energy vision—as well as the "2050 Carbon Neutral Declaration" announced by the Japanese government in October 2020 and carbon-neutrality-targeting initiatives by Japanese companies—all focus on the use of renewable energy and energy conservation as their main strategies. In addition to these initiatives to drastically reduce emissions of greenhouse gases such as carbon dioxide (CO₂), other initiatives take an approach that involves absorbing and using the CO₂ that is emitted. We spoke with Dr. Sousuke Imamura, a senior distinguished researcher at NTT Space Environment and Energy Laboratories, about one such initiative to reduce marine CO₂ by applying breeding technologies to algae, fish, and shellfish.



Rising Researchers

Yusuke Ijima, Distinguished Researcher, NTT Human Informatics Laboratories

▼ Abstract

Speech-synthesis technology improves accessibility for people with disabilities and the elderly and supports peoples' daily lives in applications such as call centers and car-navigation systems. It is currently being used in applications such as automatically generating narration, game-character voices, and voices in multiple languages while preserving the tone of voice. Speech-synthesis technology can be used not only for creating voice actors and celebrity voices but also to restore the voices of people who have lost their voice for some reason, if audio or video of them is available. It can thus greatly contribute to society, but challenges in making synthesized speech sound more natural remain. We spoke with Distinguished Researcher Yusuke Ijima, who developed the latest speech-synthesis technology, "zero/few-shot cross-lingual speech synthesis."



Feature Articles

Research and Development for NTT C89: NTT Group's Space Business

Improving Mobile Communication Service Quality Using Non-terrestrial Networks

▼ Abstract

At NTT, we aim to achieve ultra-wide coverage for mobile communication services using non-terrestrial networks (NTNs) in the era of Beyond fifth-generation mobile communication system (5G)/6G. This article introduces our efforts to provide customers with high-quality mobile communication services that meet the required conditions for throughput, latency, etc., even when using NTNs.

