

External Awards

Young Researcher's Award

Winner: Kei Fujimoto, NTT Network Service Systems Laboratories

Date: October 7, 2020

Organization: The Institute of Electronics, Information and Communication Engineers (IEICE) Technical Committee on Network Systems

For “KBP: Kernel Enhancements for Low Latency Networking without Application Customization in Virtual Server.”

Published as: K. Fujimoto, M. Kaneko, and K. Matsui, “KBP: Kernel Enhancements for Low Latency Networking without Application Customization in Virtual Server,” IEICE Tech. Rep., Vol. 120, No. 183, NS2020-54, pp. 1–6, Oct. 2020.

Best Paper Award

Winners: Manabu Yoshino and Hiro Suzuki, NTT Access Network Service Systems Laboratories; I Gede Astawa and Mahyar Koswara, IRS, Telkom DDS, PT Telekomunikasi Indonesia Tbk; Tri Trinh and Bang Nguyen, R&D Center, Viet Nam Posts and Telecommunications Group

Date: October 8, 2020

Organization: 25th OptoElectronics and Communications Conference (OECC 2020)

For “Zero-touch Multi-service Provisioning with Pluggable Module-type OLT on Access Network Virtualization Testbed.”

Published as: M. Yoshino, H. Suzuki, I. G. Astawa, M. Koswara, T. Trinh, and B. Nguyen, “Zero-touch Multi-service Provisioning with Pluggable Module-type OLT on Access Network Virtualization Testbed,” OECC 2020, Taipei, Taiwan, Oct. 2020.

Papers Published in Technical Journals and Conference Proceedings

Gamifying World Wide Web Using Web Browsers

Y. Shirai, M. Matsuda, S. Fujita, T. Kobayashi, and Y. Kishino
IPJSJ Journal, Vol. 61, No. 11, pp. 1660–1679, November 2020.

We propose a World Wide Web (WWW)-based game concept that applies the characteristics of location-based games to the WWW. While location-based games can offer benefits such as improving fitness, WWW-based games can offer the function of computation, website navigation, and education. Based on our concept, we developed “text monster,” a game that enables users to scramble for websites using Japanese words. This paper describes text monster and discusses the process of designing games on the WWW.

Collection and Analyses of Exemplary Speech Data to Establish Easy-to-understand Speech Synthesis for Japanese Elderly Adults

H. Nakajima and A. Aono

Proc. of the 23rd Conference of the International Committee for the Co-ordination and Standardisation of Speech Databases and Assessment Techniques (Oriental COCOSDA 2020), pp. 145–150, Yangon, Myanmar, November 2020.

This paper describes a newly developed Japanese speech database used to find speech characteristics and speaking styles that elderly adults actually think it is easy to understand to develop a speech-synthesis method for elderly adults (senior citizens). This speech

database is characterized by two features: i) its sentences are largely taken from newsletters beyond just the content that elderly adults tend to know and ii) the sentences are spoken by exemplary speakers selected through an audition process from the perspective that elderly adults actually think it is easy to understand. This paper describes the design of our database and the basic characteristics measured by applying conventional theories. Finally it indicates the extension directions of the conventional theories to establish an easy-to-understand speech synthesis method for elderly adults.

Gain Instability in Forward-pumped Raman Amplifier and Its Suppression Utilizing Dual-arm Depolarizer for Pump Light

H. Kawakami, S. Kuwahara, and Y. Kisaka

The 46th European Conference on Optical Communication (ECOC 2020), Brussels, Belgium, December 2020.

We clarified the requirements for the depolarizer for the pump light used in a forward pumped Raman amplifier. Management of the optical phases is required to achieve stable gain. Utilizing a dual-arm depolarizer, we demonstrated successful improvement of the 16-QAM (quadrature amplitude modulation) transmission specification.