External Awards

ELEX Best Paper Award
Winners: Takuya Hoshi, Norihide Kashio, Yuta Shiratori, Kenji Kurishima, Minoru Ida, and Hideaki Matsuzaki, NTT Device Technology Laboratories
Date: September 15, 2020
Organization: The Institute of Electronics, Information and Communication Engineers (IEICE) Electronics Society

For "InGaP/GaAsSb/InGaAsSb Double Heterojunction Bipolar Transistors with 703-GHz f_{max} and 5.4-V Breakdown Voltage."
Published as: T. Hoshi, N. Kashio, Y. Shiratori, K. Kurishima, M. Ida, and H. Matsuzaki, "InGaP/GaAsSb/InGaAsSb Double Heterojunction Bipolar Transistors with 703-GHz f_{max} and 5.4-V Breakdown Voltage," IEICE Electronics Express, Vol. 16, No. 3, p. 20181125, 2019.

Communications Society: Distinguished Contributions Award
Winner: Toshihito Fujiwara, NTT Access Network Service Systems Laboratories
Date: September 16, 2020
Organization: IEICE

For his contribution to the operation of Technical Committees in Communications Society.

Electrical Science and Engineering Award
Winners: Hideki Maeda and Hiroki Kawahara, NTT Network Service Systems Laboratories; Asuka Matsushita, NTT Electronics
Date: September 28, 2020
Organization: The Promotion Foundation for Electrical Science and Engineering

For the development and deployment of Beyond-100G optical transport system.

Best Paper Award
Winners: Keisuke Tsunoda, Naoki Arai, and Kazuaki Obana, NTT Smart Data Science Center
Date: October 7, 2020
Organization: Information Processing Society of Japan (IPSJ)

For "Estimating Number and Dwell Time from CO_2 Concentration Based on Partial Modelling with Variable Time Window."
Published as: K. Tsunoda, N. Arai, and K. Obana, "Estimating Number and Dwell Time from CO_2 Concentration Based on Partial Modelling with Variable Time Window," Multimedia, Distributed, Cooperative, and Mobile Symposium (DICOMO) 2020, 2F-1, June 2020.

Papers Published in Technical Journals and Conference Proceedings

Relationship between Scenery Structure and Illusion Strength on the Basis of the Three-dimensional Interpretation of the Café Wall Illusion
K. Maruya and T. Ohtani
Journal of Graphic Science of Japan, Vol. 54, No. 2, pp. 13–18, September 2020.

When the shadows of a group of linear columns projected on a stepped three-dimensional (3D) plane are diagonally viewed, the retinal image shows a geometric pattern that is similar to the Café wall illusion, which is a popular geometric illusion. In this study, we investigated the relationship between the geometric structure of a scene, such as the 3D shape, viewing angle, and direction of the light source, and the strength of the Café wall illusion perceived from the retinal image of those 3D situations. The difference in the depth at which the shadows fall should be approximately 1–2% of the observation distance to result in a strong Café wall illusion. The results of our investigation indicate that the information of the shadow that falls on an object is an effective clue for estimating the shape of the object surface with relatively small depth differences in the case of large viewing distances.