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”High Electron Mobility Transistor, HEMT” IEEE Milestone Dedication Ceremony and Commemorative Lectures (The 11th Lecture Meeting of Tokyo Section in 2019) Taking Place

●IEEE Milestone Dedication Ceremony

The “High Electron Mobility Transistor, HEMT”, invented in 1979 was certified as IEEE milestone. The dedication ceremony for IEEE milestone was held on December 18, 2019 at Empire Hotel Tokyo. Dr. Toshio Fukuda, IEEE President-Elect, Professor of Meijo University, presented the plaque to Dr. Hirotaka Hara, CEO and Representative Director of Fujitsu Laboratories Ltd. The HEMT was the 35th IEEE milestone in Japan.

Achievement on the plaque is as follows.

・High Electron Mobility Transistor, HEMT, 1979

“The HEMT, invented in 1979, was the first transistor to incorporate an interface between two semiconductor materials with different energy gaps. HEMT proved superior to previous transistor technologies due to high mobility of channel carriers, resulting in high speed and high frequency performance. HEMTs have been widely used in radio telescopes, satellite broadcasting receivers and cellular base stations, giving rise to a fundamental technology supporting the information and communication society.”

A presentation ceremony hosted by IEEE Tokyo Section was held at Hikari-no-ma, Imperial Hotel Tokyo. There were 66 attendees. The master of ceremonies was Dr. Yasuhiro Takishima, Secretary of IEEE Tokyo Section, Executive Director of KDDI Research, Inc. First on the agenda, Dr. Hideyuki Tokuda, Chair of IEEE Tokyo Section, President of National Institute of Information and Communications Technology, gave a speech as an organizer, followed by Dr. Toshio Fukuda. Next, a plaque was presented by Dr. Toshio Fukuda to Dr. Hirotaka Hara. Dr. Hirotaka Hara gave a speech on behalf of the plaque recipient. After the presentation ceremony, Dr. Hideyuki Tokuda handed a letter of thanks to Dr. Naoki Hara, Senior Expert at Fujitsu Laboratories, Ltd. The plaque is put on display in their Laboratory in Atsugi, Kanagawa.

After that, the commemorative celebration was held by Fujitsu Laboratories Ltd. There were 66 attendees. Outside of the venue, the real HEMT was on display. The celebration began with the congratulatory address of Dr. Akinori Nishihara, IEEE R10 Director, Professor Emeritus of Tokyo Institute of Technology, followed by Dr. Hiroyuki Sakaki, Managing Director of Toyota School Foundation. The party started with a toast by Mr. Hidenori Furuta, Corporate Executive Officer of Fujitsu Limited who is also Director Chairman of Fujitsu Laboratories Ltd.

HEMT on display

IEEE Milestone plaque

Commemorative photo of dedication ceremony

(From left) Dr. Hideyuki Tokuda, Chair of IEEE Tokyo Section, President of National Institute of Information and Communications Technology, Dr. Toshio Fukuda, IEEE President-Elect, Professor of Meijo University, Dr. Hirotaka Hara, CEO and Representative Director of Fujitsu Laboratories Ltd. and Dr. Takashi Mimura, Honorary Fellow of Fujitsu Laboratories Ltd.

●Commemorative Lectures (The 11th Lecture Meeting of Tokyo Section in 2019)
Following the commemorative celebration, the commemorative lectures (The 11th Lecture Meeting of Tokyo Section in 2019) was hosted by Tokyo Technical Program Committee and co-sponsored by IEEE LMAG Tokyo. The following 5 invited speakers gave lectures to 88 attendees. Dr. Atsushi Kanno, Secretary of Tokyo Technical Program Committee, Planning Manager of National Institute of Information and Communications Technology, proceeded to introduce the five lectures.

Lecture 1
Dr. Isao Shirakawa (Japan Council History Committee Chair)
"IEEE Milestones in Electrical Engineering and Computing"

Lecture 2
Dr. Takashi Mimura (Fujitsu Laboratories Ltd. Honorary Fellow)
"Development of HEMT and the Research and Development of Early Days"

Lecture 3
Dr. Hiroyuki Sakaki (Toyota School Foundation Managing Director)
"Physics of Semiconductor Heterostructures and the Effect of HEMT on Physics"

Lecture 4
Dr. Iwao Hosako (NICT Advanced ICT Research Institute Director General)
"The Role of HEMT in the Society's Future"

Lecture 5
Dr. Kenji Watanabe (Fujitsu Laboratories Ltd. Devices & Materials Research Center Director General)
"Practical use of HEMT and Contribution to ICT Social Development"

[Pictures]
(Reporter : Takashi Yamada, History Committee Vice Chair)

Notice of 2020 New Fellow Elevation

The following 5 members were newly elevated to fellows (names in alphabetical order).

Tokyo Section
Akihiko Kandori *for contributions to superconductive magnetocardiography and diagnostic technology*
Atsuo Takanishi *for contribution to the development of humanoid robots*
Mutsuhiro Mori *for contributions to high voltage insulated gate bipolar transistors for traction and high voltage systems*
Yuji Suzuki *for development of electret materials*
Zhenjiang Hu *for contributions to robust software development*

Notice from IEEE Tokyo Section Office

Tokyo Bulletin is published via E-mail.

- IEEE fellow nomination application for 2020 is due March 1, 2020. You are kindly advised to complete by the deadline (See more in detail (in Japanese)).
- Have you renewed your 2020 IEEE membership? You can easily renew your membership online with your Web Account.
- Tokyo Section encourages membership upgrade to Senior Membership. Visit IEEE website for online application. For details, please refer to Senior Member Application procedure.
- Please make sure to notify IEEE HQ of any changes in your address, etc. Online notification is available by registering your Web Account.
- IEEE Tokyo Section welcomes any comments, requests or inquiries from our members. Please send them to tokyosec@ieee-jp.org.