

News From Japan



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Japan's Electrical Insulation Conference Celebrates Its 50th Anniversary

In October each year, the IEEE DEIS sponsors its important academic meeting, “Conference on Electrical Insulation and Dielectric Phenomena (CEIDP)”. Since the precursor of CEIDP, which was called “Conference on Electrical Insulation” (CEI) up to 1965 and sponsored by US National Academy of Sciences (NAS) and National Research Council (NRC) up to 1980, started in 1920 [1], the DEIS will celebrate its 2020 meeting as its centennial.

In Japan, an academic meeting similar to CEIDP was inaugurated in 1968. That is, in 1960s, at least three Japanese professors attended CEI or CEIDP meetings. The three professors are Yoshio Inuishi (born on February 2, 1921 - deceased on October 26, 1994) of Osaka University, Masayuki Ieda (October 8, 1925 - March 3, 1999) of Nagoya University, and Kichinosuke Yahagi (August 15, 1926 - August 31, 1985) of Waseda University. They were all around 40 years old at that time. They all got a strong impression and desire that Japan should also have a similar meeting. To fulfill this common desire, they tried to persuade influential persons inside the Institute of Electrical Engineers of Japan (IEEJ). After their pioneering endeavors, the first Japanese academic meeting that focused its target on electrical insulation, “Symposium on Electrical Insulating Materials” (SEIM), was held in 1968.

With the above-mentioned history, the Symposium had its 50th meeting in 2019, although the conference name was changed to “Symposium on Electrical and Electronic Insulating Materials and Applications in Systems” (SEEIMAS) in 1999, because of the expansion of related research and technology areas. In a special anniversary “Historical Session”, senior researchers such as former symposium chair persons presented their reminiscences.

The reason for holding the 50th meeting in 2019, which is the 52nd year counted from 1968, is that the symposium was not held in two years because two meetings of the IEEE DEIS sponsored “International Conference on Properties and Applications of Dielectric Materials (ICPADM)” were held in Tokyo and Nagoya, respectively, in 1991 and 2003.

In the “Historical Session”, first, Prof. Toshikatsu Tanaka (Figure 1) gave a talk on the history of activities conducted by himself and by the Technical Committee on Dielectrics and Electrical Insulation (TCDEI), IEEJ including its equivalent former committees. These committees have been a Japanese counterpart of DEI Society of IEEE. The title of his talk was “The 50th Anniversary of Electrical Insulation Symposium of Japan – Historical Retrospect over Past Stride and Future Prospect”. Dr. Tanaka worked very actively and earnestly as an assistant secretary, then secretary, and finally chair of the committee from its very beginning. In this sense, the history of himself is almost equivalent to the history of TCDEI and the histories of the two symposia on electrical insulating materials (SEIM and SEEIMAS). His retrospect went back to the initiation of several activities jointly conducted with IEEE DEIS. One such activity is the start of a regular series of short articles on “Electrical Insulation News from Japan”. Figure 2 shows an announcement written by Dr. Alan H. Cookson of Westinghouse that reported the start of this series. As you may already be aware, this series is still continuing as the column you are reading. That is, Dr. Tanaka contributed articles from 1972 to 1987 and Y. Ohki (the present author) took over his role in 1988, although Dr. S. Yasufuku also contributed articles from 1977 to 2005.

After Tanaka’s talk, Profs. Tatsuki Okamoto, Naohiro Hozumi, Yasuhiro Tanaka, and Tatsuo Takada gave their talks, mainly on their own histories of activities on research and education in their respective institutes, universities, IEEJ, and IEEE DEIS. Among them, Prof. Tatsuo Takada (Figure 3) mainly talked about his memories of instructions he received from Prof. Masayuki Ieda and of those he gave to young students and researchers in Japan and in foreign countries such as China,



Figure 1. Prof. Toshikatsu Tanaka during his special lecture in the “Historical Session”.

JAPANESE NEWS SECTION

In this edition of the Newsletter we begin the first of a regular series of articles on "Electrical Insulation News from Japan". In the June 1972 Newsletter there was an Editorial which discussed how useful it would be to have such an item to describe the important research and development work being carried out on Electrical Insulation in Japan. In response to the Editorial, the Committee on Insulating Materials of IEE Japan, under its Chairman Professor Y. Inuishi, discussed this matter and proposed Dr. Toshikatsu Tanaka from the Central Research Institute of Electric Power Industry to write the section. The first article is in the

inside pages of the Newsletter, and reviews the history of IEEJ interest in Electrical Insulation, as well as several recent conferences.

I would like to express my thanks to the Committee and to Dr. Tanaka for rising to take the bait! I am sure that EI Members will find the Japanese News of great interest.

Alan H. Cookson
Editor



Figure 2. Announcement written by Dr. Alan H. Cookson of Westinghouse in 1972 that reported the start of News from Japan Column and a photo of Dr. T. Tanaka (circa 1972).

especially. Figure 4 shows a scene when he received Prof. Ieda's instruction (in 1981) when Prof. Takada was in Prof. Markus Zahn's laboratory in the Massachusetts Institute of Technology (MIT) as a research scientist. Prof. Ieda advised Prof. Takada to visit as many eminent professors and their laboratories as possible while he was in MIT.

A similar historical or retrospective session continued on the third day of the symposium. In that session, Prof. Teruyoshi Mizutani (Figure 5) looked back on his research activities conducted in Nagoya University, on polymer morphology and behavior as electrical insulating materials.

The TCDEI-IEEJ set up awards to commemorate the aforementioned three pioneering professors. Both the Inuishi and the

Ieda Awards go to people who have made outstanding academic achievements. The former Inuishi Award was presented at the "International Symposium on Electrical Insulating Materials", which is an international conference sponsored by TCDEI-IEEJ and technically co-sponsored by IEEE DEIS. On the other hand, the latter Ieda Award was to be presented at this domestic symposium, namely, SEEIMAS. In contrast, the Yahagi Award goes to people in industry who have achieved industrially important invention and/or development.



Figure 3. Prof. Tatsuo Takada during his special lecture in the "Historical Session".

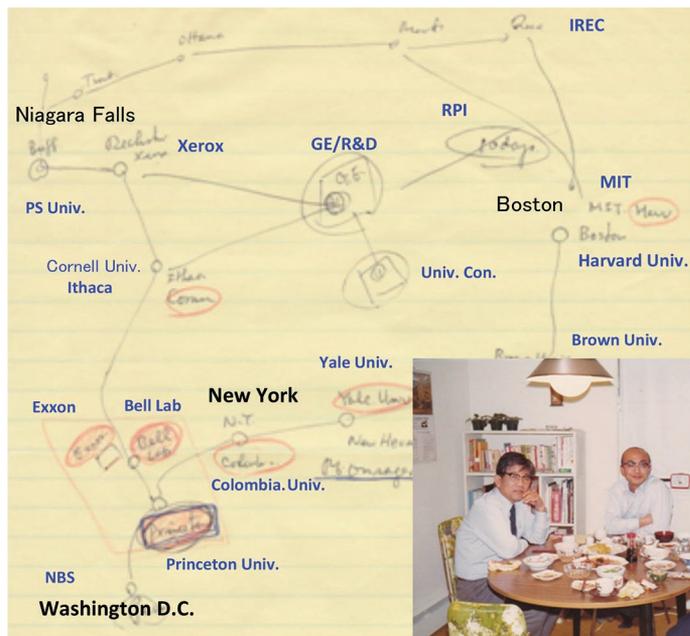


Figure 4. Prof. T. Takada (Right in the inset) received instruction from Prof. M. Ieda (Left) in 1981 when he was in the Massachusetts Institute of Technology.



Figure 5. Prof. Teruyoshi Mizutani during his special lecture in the “Historical Session”.



Figure 8. Ms. Yu Miyazaki, receiving a “Good Presentation Award” with a smiling face.



Figure 6. Dr. Shoshi Katakai (Right), receiving the Yahagi Award from Prof. Naoki Hayakawa (Left) of Nagoya University, the Chair of TCDEI-IEEJ.



Figure 7. Prof. Mitsumasa Iwamoto (Right) of Tokyo Institute of Technology received the Ieda Award from Prof. Naoki Hayakawa (Left).

In 2019, Dr. Shoshi Katakai of Sumitomo Electric received the Yahagi Award. He graduated from Waseda University and obtained his Master of Engineering degree in 1983 under the supervision of Prof. K. Yanagi. He was awarded because of his significant contributions toward Sumitomo’s world-first development of polymer insulated DC high voltage power transmission cables [2-4]. Figure 6 is a picture of Dr. Katakai who was receiving the award from the Chair of TCDEI-IEEJ, Prof. Naoki Hayakawa of Nagoya University. At the same award meeting, Prof. Mitsumasa Iwamoto (Figure 7) of Tokyo Institute of Technology received the Ieda Award for his pioneering work on the development of an evaluation method of carrier transport and polarization in organic thin films by measuring the Maxwell displacement current and electric-field induced optical second-harmonic generation.

As a tradition, this symposium also awards youth attendants who conducted good presentations at poster sessions. This year, Ms. Yu Miyazaki (Figure 8), a first-year master student of Waseda University, was awarded a “Good Presentation Award”. She is studying the aging mechanism of polymer-insulated safety-related cables in nuclear power plants under the supervision of the author of this column and is the only female awardee this year.

References

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