

URSI Commission C in Japan

22th URSI-C-Japan Chairperson Masahiro MORIKURA

1. Convener: Dr. Shoichi Narahashi, NTT DOCOMO
2. Date/time: 13:00 - 17:20, 1 March, 2013
3. Venue: NTT Musashino R&D center, Tokyo, Japan
4. Registration fee: Free
5. Listed attendees: 29 persons
6. Local arrangement: Dr. Yo Yamaguchi, NTT
7. Session title: "Discovering new things by taking lessons from Japanese highly-accomplished professionals in the field of radio science"
8. Exhibition and presentation:
60 min and 50 min including Q&A for each speaker, respectively

13:00 - 14:00 Guided tour at NTT History Center of Technologies

14:20 - 14:30 Opening Talk, Prof. Masahiro Morikura URSI-C-Japan, Chair

14:30 - 15:20 "How was the Nagaoka coefficient calculated?",
Prof. Takehiko Kobayashi, Tokyo Denki University

15:20 - 16:10 "What I experienced through the development of SUBARU, an optical infrared telescope",
Dr. Izumi Mikami, Taiyo Musen Co., Ltd.

16:10 - 16:30 Coffee break

16:30 - 17:20 "Exploring the origins of the Mizuhashi/Smith chart and S parameters",
Prof. Kiyomichi Araki, Tokyo Institute of Technology

9. Reception: Restaurant Kagei (NTT Musashino R&D center)

10. The steering committee meeting took place from 11:00 to 12:00 on 1 March, 2013.

12. Concluding Remarks

In the field of radio science, Japan has played an important role and has been anticipated to make a further contribution to unsolved problems. In this workshop, we had discussed new ideas and methodologies for future research and development on radio science by taking lessons from Japanese highly-accomplished professionals.

We had three interesting talks: Prof. Takehiko Kobayashi (Tokyo Denki University) introduced the accomplishments by Prof. Hantaro Nagaoka, with a central focus on how to calculate the inductance coefficients of solenoids (Nagaoka coefficient). Dr. Izumi Mikami (Taiyo Musen Co., Ltd.) presented what he had experienced through the development of SUBARU which is an 8.2-meter optical-infrared telescope at the summit of Mauna Kea, Hawaii, USA, including his anecdotes. Prof. Kiyomichi Araki (Tokyo Institute of Technology) outlined the development of the Mizuhashi/Smith chart in chronological order and gave a new circuit/antenna design method using S parameters.

Based on the talks, we had fruitful discussions to activate future research and development on radio science from the standpoint of academic interest and industrial application.

In addition, we had guided tour at NTT History Center of Technologies which is an archive of historical assets mainly comprising the NTT group companies' huge collection of technological artifacts to be handed down to generations in the twenty-first century.

We had confirmed that many participants were interested in and got a better understanding of radio science through this workshop and tour.

2. International Activities

None