IEICE Korea Section (Electronics)

Representative : Professor Jang-Kyoo Shin
Kyungpook National University
Daegu, Korea

1. ICT R&D environment in Korea

Major strategies and goals of ICT R&D in public and private sectors in Korea are as follows. Research-oriented universities, government-supported research institutes and leading ICT companies are actively involved in the R&D of following themes.

(1) IT convergence : Creating more IT convergences in shipbuilding, energy, automobiles, medicine, textile, machinery, aerospace, construction, defense, and robotics.

(2) Software : Assisting domestic companies in becoming global companies in IT services and package software.

(3) Hardware : Maintaining the global market share in major items such as memory, handset and TFT LCD and encouraging to develop other IT hardware items.

(4) Broadcasting and communications : Providing the best quality broadcasting and communication services and activating the markets of WiBro, IPTV and 3D TV in the early stage.

(5) Internet : Constructing UBcN (ultra broadband convergence network) and the best information security server and developing necessary hardwares and softwares for Internet of Things (IoT).

2. Introduction of academic activities

A lecture meeting on “Bio Image Sensors Technology for Non Label Neurotransmitter Imaging – Fusion of Bio Sensor Technology and LSI Technology” will be held on January 21 in 2015 at Kyungpook National University in Daegu, Korea. Professor Kazuaki Sawada of Toyohashi University of Technology will be invited to give a talk at the lecture meeting. Professor Kazuaki Sawada is one of IEICE members and well known as an expert in the field of bio image sensors. This special field has been discussed in many international conferences over the past ten years to develop high performance and low cost bio image sensors using integrated circuit fabrication technology. It is expected that the lecture meeting will give a motivation for research activities in the special field to the members of the Section or encourage their current academic activities. Additionally, since bio sensors and image sensors have also been studied for a long time in Kyungpook National University which is selected as the venue, the lecture meeting participants can visit the laboratories and exchange opinions. Thus, the lecture meeting will be a valuable opportunity for the general participants to discuss or learn about the recent progress of the technologies. The lecture meeting will be announced to the members of the Section and it is expected to give them a chance to join IEICE activities.

3. Organization and role assignment of IEICE Korea-Electronics Section

Representative : Prof. Jang-Kyoo Shin
(Kyungpook National University, Daegu, Korea)
- Planning of activities, general affairs

Secretary : Prof. Seong-Ho Kong
(Kyungpook National University, Daegu, Korea)
- Financial affairs, promoting activities

4. Strategy to extend the membership

In order to extend the membership and increase the number of members, we are planning to organize a lecture meeting or workshop in Seoul, where many universities and companies are located. Professors, graduate students and researchers will be able to have an opportunity to join the lecture meeting or workshop and learn about benefits of joining IEICE.

5. Plan of themes for the lecture sponsored by IEICE

Themes for the lecture sponsored by IEICE are as follows.

- Time of flight CMOS image sensor
- Nano materials and devices
- Multimodal smart sensor
- Nanoplasmonics

6. Preferable topics to collaborate with ten regional Sections in Japan

Collaborations with Tokai section in Japan in the form of joint research and student/faculty exchange are already on-going.
Preferable topics are as follows.

- Development of high performance CMOS image sensors (Shizuoka University)
- Development of intelligent sensor systems (Toyohashi University of Technology)