

Commission K (Electromagnetics in Biology & Medicine) Activity Report
October 2017 – May 2018

June 22, 2018
Jianqing Wang

1 Activities

1.1 Core member (past- chairperson and secretaries, nominee of next chairperson and candidates of next secretary) meeting of the Japanese Commission K

- ◆ Date: December 19, 2017
- ◆ Place: Akihabara Satellite Campus, Tokyo Metropolitan University, Tokyo
- ◆ Topics:
 - 1) The candidates of secretaries of the Japanese URSI-Commission K for 24th term of the Science Council were decided.
 - 2) Inheritance and confirmation of work contents of Japanese URSI-Commission K were done.

1.2 Preparation meeting of the Japanese URSI-Commission K for the 24th term of the Science Council of Japan

- ◆ Date: March 1, 2018
- ◆ Place: Akihabara Satellite Campus, Tokyo Metropolitan University, Tokyo
- ◆ Topics:
 - 1) The nominees of the 24th term committee members were introduced by Prof. Jianqing Wang (Nagoya Inst. of Tech.), who was approved as the nominee of the committee chairperson of Japanese URSI-Commission K for the 24th term of the Science Council of Japan.
 - 2) The candidates of secretaries of the committee were confirmed.
 - 3) The activity policy of the committee was discussed.
 - 4) The meeting of the Japanese URSI for the 23rd term of the Science Council of Japan was introduced by Prof. K. Ito (Chiba Univ.).

1.3 Scientific symposium (Co-operated by Japanese Society for Electromagnetics in Biology and Medicine)

8 oral presentations and one special lecture were given with **28** participants. A young research excellent presentation award was given to the third presenter.

- 1) “Assessment of human exposure to radiofrequency electromagnetic fields in the

- vicinity of smart meter” by T. Shina (CRIEPI) et al.
- 2) “A study on nonlinear effect of modulated low frequency electromagnetic field on response of nerve stimulation” by H. Shinoda, et al. (Nagoya Inst. of Tech.)
 - 3) “Theoretical analysis of human exposure to electromagnetic waves from 6 GHz to 1 THz” by K. Li (NICT) et al.
 - 4) “A flexible coil for various transcranial magnetic stimulation patterns” by M. Liu (Tokyo Univ.) et al.
 - 5) “Study on SAR probe calibration by two antenna method and uncertainty of calibration method” by S. Shimoyama (Tokyo Univ. of Agriculture Tech.) et al.
 - 6) “Evaluation of heat generation characteristics of implantable medical devices” by T. Komatsu (Tokai Univ.) et al.
 - 7) “Evaluation of the thermal damages by microwave surgical devices” by R. Manago (Chiba Univ.) et al.
 - 8) “Multiband antenna for wireless capsule endoscopic communication by impulse radio system” by Y. Peng (Chiba Univ.) et al.
 - 9) “Medical applications of electromagnetic wave technology” (Special lecture) by K. Ito (Chiba Univ.)

2 Associated meetings

2.1 Past meetings

- 1) WHO meeting on the International Systems of Radiation Protection, Munich, Germany, 8-10 November 2017
- 2) Global Coordination of Research and Health Policy on RF Electromagnetic Fields (GLORE Meeting BioEM2017, Washington D.C., USA, 30 November-1 December 2017
- 3) The 7th Asian Congress of Hyperthermic Oncology (ACHO), Seoul, Korea, 23-25 May 2018
- 4) AT-RASC 2018, Gran Canaria, Spain, 28 May-1 June, 2018, < <http://www.atrasc.com/homepage.php> >
- 5) 5th European IRPA Congress, 4-8 June 2018, The Hague, Netherlands
- 6) IEEE-IMBioC2018, Philadelphia, USA, 14-15 June 2018, < <https://imbio-c-ieee.org/>>

2.2 Future meetings

- 7) BioEM 2018, Piran, Slovenia, 25-29 June 2018, < <http://www.bioem2018.org/>>
- 8) The 35th annual meeting of Japanese Society for Thermal Medicine, Fukui, Japan, 30 August-1 September 2018, < <http://web.apollon.nta.co.jp/jstm35/>>
- 9) AP-RASC 2019, New Delhi, India, 9-15 March 2019, <<http://aprasc2019.com/>>