

Commission K (Electromagnetics in Biology & Medicine) Activity Report

July 28th, 2014 by Yasuhiko Jimbo

1 Activity

1.1 Election of the nominee of the committee chairperson of Japanese URSI-Commission K for the 23rd term of the Science Council of Japan

- ◆ Schedule: Announcement June 1st, 2014
 Voting date June 1st-10th, 2014
- ◆ Prof. Koichi Ito (Chiba University) was approved as the nominee of the committee chairperson of Japanese URSI-Commission K for the 23rd term of the Science Council of Japan by a confidence vote with bylaw.

1.2 Preparation of National report

- ◆ Topics:

K1 Biological Effects of Electromagnetic Fields

- K1.1 Static magnetic field
- K1.2 Extremely Low Frequency (ELF) magnetic field
- K1.3 Intermediate Frequency (IF) magnetic field
- K1.4 RF electromagnetic field and microwaves
- K1.5 Millimeter wave
- K1.6 Contact currents

K2 Dosimetry

- K2.1 Numerical dosimetry
- K2.2 Experimental dosimetry
- K2.3 Development of exposure setups and dosimetry for medical and biological studies
- K2.4 Mechanism between biological tissues and EMF
- K2.5 Dosimetry for medical application (see also K3)

K3 Biomedical Applications

- K3.1 Hyperthermia
- K3.2 Therapeutic applications of electromagnetic fields
- K3.3 Magnetic resonance imaging
- K3.4 Electromagnetic interference (EMI) of implanted medical devices
- K3.5 Medical instrumentation

2 Meetings

2.1 Past meetings

- 1) (Domestic) IEEJ workshop of health risk assessment, dosimetry and medical application of EMF, Tokyo, March 10, 2014
- 2) (Domestic) 2014 IEICE General Conference, Niigata, Japan, March 18-21, 2014

http://www.gakkai-web.net/gakkai/ieice/G_2014/index.html

- 3) (Domestic) 2014 IEEE General Conference, Ehime, Japan, March 18-20, 2014
<http://www2.iee.or.jp/ver2/honbu/03-conference/14-taikai/>
- 4) 2014 Int. Symposium Electromagnetic Compatibility, Tokyo, May 12-16, 2014, <http://www.ieice.org/~emc14/>
- 5) 5th International Conference on Electromagnetic Fields, Health and Environment, Porto, Portuguese, April 24-26, 2014 <http://www.apdee.org/conferences/ehe2014/index.php>
- 6) BioEM2014, Cape Town, South Africa, June 8-13, 2014, <http://www.bioem2014.org/>
- 7) (Domestic) The 53rd Annual Conference of Japanese Society for Medical and Biological Engineering, Sendai, June 24-26, 2014, <http://www.congre.co.jp/jsmbe53/index.html>
- 8) 9th FENS Forum of Neuroscience, Milan, Italy, July 5-9, 2014, <http://fens2014.neurosciences.asso.fr/>

2.2 Future meetings

- 1) 31st URSI General Assembly and Scientific Symposium, Beijing, China, August 16-23, 2014,
<http://www.chinaursigass.com/>
- 2) 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'14), August 26-30, 2014, Chicago, USA, <http://embc.embs.org/2014/>
- 3) 31st Annual Meeting of Japanese Society for Thermal Medicine and 6th ACHO, Fukui, Japan, September 5-6, 2014, <http://www.jsho.jp/>
- 4) 8th International Workshop on Biological Effects of Electromagnetic Fields, Varna, Bulgaria, September 21-26, 2014, <http://emf2014.emfbg.com/general.html>
- 5) 44th Annual Meeting of Society for Neuroscience (Neuroscience 2014), November 15-19, Washington, DC, USA, <http://www.sfn.org/annual-meeting/neuroscience-2014>
- 6) 19th International Symposium on Antennas and Propagation (ISAP 2014), Kaohsiung, Taiwan, December 2-5, 2014, <http://isap2014.org/>
- 7) 2014 IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications (IMWS-Bio 2014), London, United Kingdom, December 8-10, 2014
<http://www.imws2014.org/>
- 8) BioEM2015, Monterey, USA, June 14-19, 2015, <http://www.bioem2015.org/>
- 9) ICNIRP 8th International NIR Workshop, South Africa, June 27-28, 2016, <http://www.icnirp.de/upcoming.htm>