

Commission K (Electromagnetics in Biology & Medicine) Activity Report

March 19th, 2014 by Yasuhiko Jimbo

1 Activity

1.1 Unofficial meeting of Japanese URSI-Commission K for 22nd term of the Science Council of Japan

- ◆ Date: December 27, 2013
- ◆ Place: Akihabara satellite campus of Tokyo Metropolitan University, Tokyo
- ◆ Topics:
 - Report of the URSI-Commission K international workshop, which was held in Paris during 29th and 30th, August, 2013.
 - Schedule for editing the national report of Japanese URSI-commission K
 - Activity of Electromagnetics in Medicine and Biology Society
 - 6th symposium of Electromagnetics in Medicine and Biology Society, scheduled on 28th, January, 2014
 - Website of Electromagnetics in Medicine and Biology Society
- ◆ Miscellaneous
 - URSI national radio science conference 2014
 - URSI-GA 2014
- ◆ Invited Lecture:
 - “Effect of static magnetic field on human brain” by Dr. Tatsuya Mima (Associate Professor, Kyoto University)

1.2 4th meeting of Japanese URSI-Commission K for 22nd term of the Science Council of Japan

- ◆ Date: January 28, 2014
- ◆ Place: Akihabara satellite campus of Tokyo Metropolitan University, Tokyo
- ◆ Topics:
 - Representative person of Commission K in URSI-GA 2014: Prof. Masao Taki of Tokyo Metropolitan University
 - Discussion on contribution to URSI-GA 2014
- ◆ Miscellaneous
 - Schedule for editing the national report of Japanese URSI-commission K

1.3 Scientific symposium (The 6th symposium of electromagnetics in medicine and biology society, co-organized with MICT (Medical Information & Communication Technology) Society)

- Eleven research reports were presented with 47 participants.
 - “Discussion about biological information acquisition using SISO-UWB radar” by Suzuki, A. et al. (Meiji University)
 - “Theoretical analyses for the breast cancer detection using UWB radar” by Okuyama, Y. et al. (Yokohama National University)
 - “Transmission characteristics and SAR evaluation of UWB implant antenna” by Morimoto, Y. et al. (Nagoya Institute of Technology)
 - “The study of detection of biological information using UWB” by Kawamura, K. et al. (Meiji University)
 - “Reaction of blood vessels to electrical stimulation” by Inoue Y. et al. (Tokyo University)
 - “Fundamental study for human RBC condition in electric field exposure” by Shimizu H.O. et al. (Hokkaido Institute of Technology)
 - “Development of microwave tissue coagulation for surgical management” Endo Y. et al. (Chiba University)
 - “Computational modeling of electric fields induced by transcranial magnetic stimulation”, Laakso I, et al. (Nagoya Institute of Technology)
 - “Exposure assessment of wireless power transmission system by MoM-FDTD method”, by Chakarothai, J. et al. (NICT)

- “Modification and problem of guideline about application of wireless communications device to medical instrument”, by Hanada, E., (Shimane University)
- Network management service for small medical organization using Open Flow” by Lee JS. et al. (Tokyo Institute of Technology)

2 Meetings

2.1 Past meetings

- 1) ISMRM 21th Annual Meeting & Exhibition, Salt Lake City, USA, April 20-26, 2013, <http://ismrm.org/13/>
- 2) 2013 International Symposium on Electromagnetic Theory (EMTS 2013), Hiroshima, Japan, May 20-23, 2013, <http://ursi-emts2013.org/>
- 3) BioEM2013, Thessaloniki, Greece, June 10-14, 2013, <http://www.bioem2013.org/bioem2013/>
- 4) The 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'13), Osaka, Japan, 3-7 July 2013, <http://embc2013.embs.org/index.html>
- 5) Joint Workshop of URSI Commission K and ICNIRP organized by International Union of Radio Science, Commission-K and the International Commission on Non-Ionizing Radiation Protection (ICNIRP), Paris, France, August 29-30, 2013.
- 6) (Domestic)The 30th Annual Meeting of Japanese Society for Thermal Medicine, Yokohama, Japan, August 30-31, 2013 <http://web.apollon.nta.co.jp/jstm30/index.html>
- 7) 2013 Asia-Pacific Radio Science Conference, Taipei, Taiwan, September 3-7, 2013 <http://aprasc13.ntu.edu.tw/>
- 8) XVI International Symposium on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering, Ohrid, Macedonia, September 12th-14th, 2013 , <http://isef2013.feit.ukim.edu.mk/index.html>
- 9) (Domestic) IEICE Society Conference 2013, Fukuoka, Japan, September 17-20, 2013 http://www.toyoag.co.jp/ieice/S_top/s_top.html
- 10) CIGRE 3rd International Colloquium on Low Frequency Electric and Magnetic Fields (EMF-ELF-2013), Nara, Japan, October 15-16, 2013
- 11) Seminar: Method for assessing complex magnetic field exposure from welding against ICNIRP and the coming EU directive by Prof. Yngve Hammerius, Fukuoka, October 17, 2013
- 12) 10th World Congress Railway Research, Sydney, Australia, November 25-28, 2013, <http://www.wcrr2013.org/>
- 13) International Symposium on Frontier Researches in Sustainable Humanosphere 2013, Theme 4: Biological effects of electromagnetic fields, Kyoto, November 27-28, 2013
- 14) (Domestic) The 6th symposium of electromagnetics in medicine and biology society, co-organized with MICT (Medical Information & Communication Technology) Society, Tokyo, Jan 28, 2014

2.2 Future meetings

- 1) (Domestic) IEEEJ 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 IEEEJ 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) 31st Annual Meeting of Japanese Society for Thermal Medicine and 6th ACHO, Fukui, Japan, September 5-6, 2014, <http://www.jsho.jp/>
- 8) 8th International Workshop on Biological Effects of Electromagnetic Fields, Varna, Bulgaria, September 21-26, 2014, <http://emf2014.emfbg.com/general.html>
- 9) 19th International Symposium on Antennas and Propagation (ISAP 2014), Kaohsiung, Taiwan, December 2-5, 2014 <http://isap2014.org/>
- 10) 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/>
- 11) ICNIRP 8th International NIR Workshop, South Africa, June 27-28, 2016, <http://www.icnirp.de/upcoming.htm>