

Commission K (Electromagnetics in Biology & Medicine) Activity Report

November 10th, 2013 by Yasuhiko Jimbo

1 Activity

1.1 International Joint Workshop of URSI Commission K and ICNIRP

URSI Commission K has held an international joint workshop with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) in Paris, August 29 and 30, 2013. ICNIRP develops internationally accepted EMF guidelines under official consideration by WHO and has large relationship with URSI Commission K; current and past chairs of URSI Commission K were members of ICNIRP, e.g., Prof. M. Taki, Prof. B. Veyret, and Prof. J. Lin.

Many researchers in URSI Commission K hope to discuss with and contribute to ICNIRP on these active issues. ICNIRP also needs updated information of dosimetric studies on human exposure to RF EMF and discussion with medical experts because ICNIRP has recently started revision of its RF safety guidelines and issued DC magnetic field guidelines for occupation environment. Finally, ICNIRP and URSI Commission K have agreed with co-organization of the joint workshop.

In the WS, general review and recent update of studies on Electromagnetics in Medicine and Biology and on Non-Ionizing Radiation Protection were presented. The number of the presentations was 26. The attendees were about 50 from EU, US and Asia. In a key-note session, three presentations were made by representatives from WHO, IARC, and ICNIRP. Other sessions were “Human exposure assessment”, “Standards”, “Medical Application of EMF”, “Blue light” and regular sessions. All of the presentations were well organized and followed by active discussion.

Japanese committee of URSI Commission K has strongly supported the workshop. Prof. Taki has chaired the workshop, and Dr. Watanabe has worked as the secretary of the workshop and the liaison of ICNIRP. Finally, 11 researchers attended from Japan. The budget of the workshop was supported by URSI and TELEC.

2 Meetings

2.1 Past meetings

- 1) (Domestic) 2012 IEICE General Conference, Gifu, Japan, March 19-22, 2013
http://www.toyoag.co.jp/ieice/G_top/g_top.html
- 2) (Domestic) 2013 IEEJ General Conference, Nagoya, Japan, March 20-22, 2013
<http://www2.iee.or.jp/ver2/honbu/03-conference/13-taikai/index.html>
- 3) 7th European Association on Antennas and Propagation (EuCAP2013), Gothenburg, Sweden, April 8-12, 2013, <http://www.eucap2013.org/>
- 4) ISMRM 21th Annual Meeting & Exhibition, Salt Lake City, USA, April 20-26, 2013
<http://ismrm.org/13/>

- 5) 2013 International Symposium on Electromagnetic Theory (ETMS 2013), Hiroshima, Japan, May 20-23, 2013, <http://ursi-emts2013.org/>
- 6) BioEM2013, Thessaloniki, Greece, June 10-14, 2013
<http://www.bioem2013.org/bioem2013/>
- 7) 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>
- 8) 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.
- 9) (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>
- 10) 2013 Asia-Pacific Radio Science Conference, Taipei, Taiwan, September 3-7, 2013
<http://aprasc13.ntu.edu.tw/>
- 11) 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>
- 12) (Domestic) IEICE Society Conference 2013, Fukuoka, Japan, September 17-20, 2013
http://www.toyoag.co.jp/ieice/S_top/s_top.html
- 13) CIGRE 3rd International Colloquium on Low Frequency Electric and Magnetic Fields (EMF-ELF-2013), Nara, Japan, October 15-16, 2013
- 14) Seminar: Method for assessing complex magnetic field exposure from welding against ICNIRP and the coming EU directive by Prof. Yngve Hamnerius, Fukuoka, October 17, 2013

2.2 Future meetings

- 1) 10th World Congress on Railway Research, Sydney, Australia, November 25-28, 2013
<http://www.wcrr2013.org/>
- 2) International Symposium on Frontier Researches in Sustainable Humanosphere 2013, Theme 4: Biological effects of electromagnetic fields, Kyoto, November 27-28, 2013
- 3) (Domestic) The 6th symposium of electromagnetics in medicine and biology society, co-organized with MICT (Medical Information & Communication Technology) Society, Tokyo, Jan 28, 2014
- 4) (Domestic) IEEEJ workshop of health risk assessment, dosimetry and medical application of EMF, Tokyo, March 10, 2014
- 5) 2014 International Symposium on Electromagnetic Compatibility, Tokyo, May 20-23, 2014
<http://www.ieice.org/~emc14/>
- 6) 5th International Conference on Electromagnetic Fields, Health and Environment, Porto, Portuguese, April 24-26, 2014 <http://www.apdee.org/conferences/ehe2014/index.php>
- 7) BioEM2014, Cape Town, South Africa, June 8-13, 2014, <http://www.bioem2014.org/>
- 8) 8th International Workshop on Biological Effects of Electromagnetic Fields, Varna, Bulgaria, September 21-26, 2014, <http://emf2014.emfbg.com/general.html>