

Commission K (Electromagnetics in Biology & Medicine) Activity Report

July 9th, 2013 by Yasuhiko Jimbo

1 Activity

1.1 2nd meeting of Japanese URSI-Commission K for 22nd term of the Science Council of Japan

- ◆ Date: March 27, 2013
- ◆ Place: Tokyo Metropolitan University's Akihabara satellite campus, Tokyo
- ◆ Topics:
 - Application of the additional members of Japanese URSI-Commission K for the 22nd term of the Science Council of Japan: Prof. Hitoshi Tabata (Tokyo University) and Prof. Kodo Kawase (Nagoya University).
 - The proposal of the URSI-Commission K international workshop. The workshop will be held in Paris during 29th and 30th, August, 2013.
 - Annual plan of the Electromagnetics in Medicine and Biology Society; 2-3 research meetings and a symposium will be held in fiscal year 2013.
- ◆ Miscellaneous
 - Introduction of the master research plan of the Science Council of Japan
 - Preparation for URSI-GA 2014
- ◆ Topical Lecture:
 - "Safety of MRI examination to patient implanted medical devices" by Prof. Kagayaki Kuroda (Tokai University)
 - "The engineering study and roles of human protection from low and intermediate frequency electromagnetic field" by Dr. Kenichi Yamazaki (Central Research Institute of Electric Power Industry)

1.2 3rd meeting of Japanese URSI-Commission K for 22nd term of the Science Council of Japan

- ◆ Date: May 30, 2013
- ◆ Place: Tokyo Metropolitan University's Akihabara satellite campus, Tokyo
- ◆ Topics:
 - Approval of the proposal of session program related to Commission K for URSI GA 2014.
 - K01 Interactions between EMF and Biosystems (G. D'Inzeo and (Guglielmo))
 - K02 EMF Exposure Assessment (N. Kuster and T. Wu)
 - K03 Biomedical Applications: Therapeutic Applications of High-frequency EM Fields including Microwave, Laser and Infrared (J.C. Lin and K. Ito)
 - K04 Interactions between Human Body and Implanted Systems (J. Wang and (W. Kainz))
 - K05 Biological Effects of EMF (tbd)
 - K06 Biomedical Applications: Static, ELF and Pulsed Field Applications (F. Prato and S. Ueno)
 - K07 Millimeter and THz Waved in Medicine and Biology (K. Kawase and Joo-Hiuk Son)
 - KAE Dosimetry and Safety of EM Wave (J-K Pack and J. Keshvari)
 - KB01 Antennas for Medical Wireless Telemetry (E. Topsakal and Yahya Rahmat-Samii)
 - KB02 Electromagnetic Modeling of the Human body (T. Nagaoka and Ursula van Rienen)
 - KBE01 Biomedical Applications: RF Diagnostic Imaging and Modeling (S. Hagness and Gianluca Lazzi)
 - EK EMC of Wireless Power Transfer (tbd)
 - CDK Wireless Body Area Network (Commission C)
 - KT(tutorial) Medical Application (S. Ueno)

◆ Miscellaneous

- Explanation of the master research plan of the Science Council of Japan
- The URSI-Commission K international workshop in Paris during 29th and 30th, August, 2013.
- Approval of the proposal of Scientific symposium (The 6th symposium of the Electromagnetics in Medicine and Biology Society, co-organized with the MICT (Medical Information & Communication Technology) Society)

◆ Topical Lecture:

- “Response of bio-optical reflectors under low magnetic field” by Prof. Masakazu Iwasaka (Chiba University)
- “History and progress of microwave radiometer technology” by Prof. Toshifumi Sugiura (Shizuoka University)

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 IEEE 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>

2.2 Future meetings

- 1) 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.
- 2) (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>
- 3) 2013 Asia-Pacific Radio Science Conference, Taipei, Taiwan, September 3-7, 2013 <http://aprasc13.ntu.edu.tw/>
- 4) (Domestic) IEICE Society Conference 2013, Fukuoka, Japan, September 17-20, 2013
http://www.toyoag.co.jp/ieice/S_top/s_top.html
- 5) CIGRE 3rd International Colloquium on Low Frequency Electric and Magnetic Fields (EMF-ELF-2013), Nara, Japan, October 15-16, 2013
- 6) 10th World Congress on Railway Research, Sydney, Australia, November 25-28, 2013
<http://www.wcrr2013.org/>
- 7) 2014 International Symposium on Electromagnetic Compatibility, Tokyo, May 20-23, 2014
<http://www.ieice.org/~emc14/>