

34th Annual Meeting of the Bioelectromagnetics Society 2012

(BEMS 2012)

Abstract Collection – Complete Collection

**Brisbane, Australia
17-22 June 2012**

ISBN: 978-1-62276-796-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2012) by the Bioelectromagnetics Society
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact the Bioelectromagnetics Society
at the address below.

Bioelectromagnetics Society
2414 Cobblestone Way
Frederick, MD 21702-2626

Phone: (301) 663-4252
Fax: (301) 694-4948

www.bioelectromagnetics.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

SESSION: PLENARY 1

EMF SAFETY: LOOKING BACK AND LOOKING FORWARD	3
<i>Michael Repacholi</i>	
EMF BIOEFFECTS: LOOKING BACK AND LOOKING FORWARD	4
<i>Carl Blackman</i>	

SESSION: O1 – EPIDEMIOLOGY

MOBILE PHONE USE AND INCIDENCE OF GLIOMA IN THE NORDIC COUNTRIES 1979–2008: DO INCIDENCE RATES CORROBORATE CASE CONTROL STUDIES?	4
<i>Isabelle Deltour, Anssi Auvinen, Maria Feychting, Christoffer Johansen, Lars Klæboe, Risto Sankila, Joachim Schuz</i>	
USE OF MOBILE PHONES AND RISK OF BRAIN TUMOURS: UPDATE OF DANISH COHORT STUDY	6
<i>Aslak Poulsen, Patrizia Frei, Christoffer Johansen, Jørgen Olsen, Marianne Steding-Jessen, Joachim Schuz</i>	
A NEW TOOL FOR COMPARING BRAIN CANCER TRENDS BETWEEN REGISTRY DATA AND MOBILE PHONE RISK MODELS	6
<i>Vitas Anderson, Jack Rowley</i>	
HEALTH FACTORS RELATED TO ADOLESCENT WIRELESS PHONE USE	10
<i>Mary Redmayne, Euan Smith, Michael Abramson</i>	

SESSION: O2 – RF DOSIMETRY – EMISSIONS I

SURROGATE MODELING OF BASE STATION EXPOSURE	11
<i>Sam Aerts, Dirk Deschrijver, Wout Joseph, Leen Verloock, Francis Goeminne, Luc Martens, Tom Dhaene</i>	
LTE EXPOSURE ASSESSMENT AND EXTRAPOLATION	14
<i>Wout Joseph, Leen Verloock, Francis Goeminne, Gunter Vermeeren, Luc Martens</i>	
EXPOSURE TO AIR TRAFFIC CONTROL SYSTEMS	16
<i>Wout Joseph, Francis Goeminne, Gunter Vermeeren, Leen Verloock, Luc Martens</i>	
OUTPUT POWER DISTRIBUTIONS OF TERMINALS IN LTE NETWORKS	18
<i>Davide Colombi, Björn Thors, Tomas Persson, Christer Tornevik, Anders Furuskär</i>	

SESSION: O3 – IN-VITRO

DNA MICROARRAY ANALYSIS OF KERATINOCYTE GENE EXPRESSION AFTER EXPOSURE TO 60-GHZ MILLIMETER WAVES UNDER NEAR-FIELD CONDITION	21
<i>Denis Habauzit, Catherine Le Quément, Maxim Zhadobov, Ronan Sauleau, Denis Michel, Yves Le Dréan</i>	
NANOELECTROPULSE STIMULATION OF CATECHOLAMINE RELEASE FROM ADRENAL CHROMAFFIN CELLS	22
<i>Gale Craviso, Robert Wiese, Sudhata Shrestha, Indira Chatterjee, P. Thomas Vernier</i>	
THE BIOLOGICAL CONSEQUENCES OF ELEVATED GAMMA-H2AX FOCI FORMATION IN HUMAN SKIN FIBROBLASTS IN RESPONSE TO RF-EMF EXPOSURE	23
<i>Shanshan Xu, Guangdi Chen, Chunjing Chen, Chuan Sun, Zhengping Xu</i>	

SESSION: O4 – RF DOSIMETRY – EMISSIONS II

EMF SAFETY OF REMOTELY DETONATED IMPROVISED EXPLOSIVE DEVICE (IED) JAMMING SYSTEMS	24
<i>Marthinus Van Wyk, Max Birch</i>	
THE IMPACT OF ANATOMICAL DIFFERENCES ON ABSORBED ENERGY FROM EXPOSURE TO MOBILE PHONE AT DIFFERENT REGIONS IN THE BRAIN	26
<i>Fatemeh Adibzadeh, Jurriaan Bakker, Maarten Paulides, Gerard Van Rhoon</i>	
XMOBISENSE: LATERALITY AND PHONE USE	28
<i>Joe Wiart, Emmanuelle Conil, Sylvain Grand, Thierry Sarrebourg, Abdelhamid Hadjem, Nadege Varsier, Azeddine Gati</i>	
INVESTIGATION OF SAFETY RISKS CAUSED BY THE USE OF TETRA-TRANSMITTERS	29
<i>Stefan Cecil, Georg Neubauer</i>	
PARSIMONIOUS CHAOS POLYNOMIAL EXPANSIONS FOR GENITALS EXPOSURE ANALYSIS	31
<i>Amal Ghanmi, Nadege Varsier, Abdelhamid Hadjem, Emmanuelle Conil, Odile Picon, Joe Wiart</i>	
AN EXPERIMENTAL VALIDATION OF A SAR-PROBE CALIBRATION SYSTEM USING A REFERENCE WAVEGUIDE ANTENNA IN TISSUEEQUIVALENT LIQUID	33
<i>Nozomu Ishii, Yukihiro Miyota, Lira Hamada, Soichi Watanabe</i>	

SESSION: TI – SCIENCE & MEDIA

INDUSTRY PERSPECTIVE ON MEDIA REPORTS WITH POTENTIAL TO DAMAGE REPUTATION 35
Roslyn Young

A SCIENTIST’S PERSPECTIVE ON MEDIA INVOLVEMENT 37
Rodney Croft

MELTDOWN IN THE NEWSROOM: JOURNALISM AND CONVERGENT MEDIA 38
Leigh Dayton

SESSION: UQ – BIOELECTROMAGNETICS RESEARCH AT UNIVERSITY OF QUEENSLAND – MRI DOSIMETRY

COMPUTATIONAL ELECTROMAGNETICS IN MRI SYSTEMS DESIGN: GUIDELINE COMPLIANCE 38
Stuart Crozier

SESSION: PLENARY 2

ELECTROPORATION AND ELECTROPERMEABILISATION 39
Lluís M. Mir, Aude Silve, Marie Breton

STIMULATION OF MAMMALIAN CELLS BY NANOSECOND ELECTRIC PULSES 39
Andrei Pakhomov, Iurii Semenov, Mikhail Rassokhin, Angela Bowman, Raminta Rodaite-Riševiciene, Betsy Gregory, Shu Xiao, Olga Pakhomova

THE PHOSPHOLIPID NANOPORE, A COMPONENT OF THE PERMEABILIZING STRUCTURE..... 40
P. Thomas Vernier

SESSION: PA – POSTER SESSION A + MORNING REFRESHMENTS

POPULATION EXPOSURE AND RADIOFREQUENCY COVERAGE OF GSM AND UMTS MOBILE PHONE NETWORKS..... 42
Rene De Seze, François Gaudaire, Patrice Cagnon, Georges Thuroczy, Brahim Selmaoui, Paul Mazet, Samuel Mauger, Jean-Benoit Agnani

DESIGN AND ANALYSIS OF AN IMPLANTABLE ANTENNA FOR WIRELESS BODY AREA NETWORK (WBAN) APPLICATIONS..... 43
Soonyong Lee, Kyeol Kwon, Sungjin Kim, Suwhan Kim, Jaehoon Choi

ACTION OF THE STATIC MAGNETIC FIELDS ON THE ANTIOXIDANT ACTIVITY IN THE FIBROBLASTS’ CULTURE 44
Marek Glinka, Stanislaw Gawron, Aleksander Sieron, Katarzyna Pawlowska-Goral, Grzegorz Cieslar, Karolina Sieron-Stolmy

SAR REDUCTION TECHNIQUE BY THE HIGH IMPEDANCE SURFACE USING THE ARTIFICIAL MAGNETIC CONDUCTOR 45
Seungwoo Lee, Nam Kim

OCCUPATIONAL EXPOSURE TO STATIC MAGNETIC FIELDS DURING THE OPERATION OF 3.0 T MR SCANNER 46
Sachiko Yamaguchi-Sekino, Shinya Imai, Shuhei Izawa, Tsutomu Okuno

EXPOSURE SYSTEMS IN BIOELECTROMAGNETICS 47
Pawel Bienkowski, Tomasz Dlugosz, Hubert Trzaska

RF EXPOSURE SURVEYS OF MOBILE PHONE BASE STATIONS IN AFRICA COUNTRIES 51
Jack Rowley, Ken Joyner

COIL DESIGN AND DOSIMETRIC ANALYSIS OF A WIRELESS ENERGY TRANSMISSION EXPOSURE SYSTEM FOR IN VITRO STUDY..... 52
Kohei Mizuno, Junji Miyakoshi, Naoki Shinohara

IMPROVING THE COMPUTATIONAL SPEED IN LOW-FREQUENCY ELECTROMAGNETIC DOSIMETRY USING THE GEOMETRIC MULTIGRID METHOD 53
Ilkka Laakso, Akimasa Hirata

IN VIVO IMMUNOTOXIC ASSESSMENT FOR RADIO FREQUENCY ELECTROMAGNETIC FIELD WITH JUVENILE RAT 54
Shin Ohtani, Akira Ushiyama, Machiko Maeda, Yuki Ogasawara, Naoki Kunugita, Jianqing Wang, Kazuyuki Ishii

COMPARISON OF SPECIFIC ABSORPTION RATE (SAR) INDUCED IN BRAIN TISSUES OF CHILD AND ADULT USING MOBILE PHONE 56
Mai Lu, Shoogo Ueno

MEASUREMENT AND SIMULATION OF RADIOFREQUENCY EMISSIONS FROM TELECOMMUNICATIONS TRANSMITTERS..... 58
Phillip Knipe, Philip Jennings

RECALL ACCURACY OF LATERALITY OF MOBILE PHONE CALL: A VALIDATION STUDY USING SOFTWARE MODIFIED PHONE IN JAPAN 59
Kosuke Kiyohara, Kanako Wake, Soichi Watanabe, Takuji Arima, Daisuke Furushima, Yasuto Sato, Noriko Kojimahara, Masao Taki, Naohito Yamaguchi

EFFECTS OF SIMULTANEOUS COMBINED EXPOSURE TO CDMA AND WCDMA ELECTROMAGNETIC FIELDS ON HORMONE SECRETION IN RATS	62
<i>Yeung Bae Jin, Hyung-Do Choi, Jeong-Ki Park, Nam Kim, Yun-Sil Lee</i>	
EXPOSURE ASSESSMENT OF THE LOW FREQUENCY MAGNETIC FIELDS PRODUCED BY GSM MOBILE PHONES	63
<i>Carolina Calderon, Darren Addison, Terry Mee, Richard Findlay, Myron Maslanyj</i>	
EFFECT OF EXTREMELY LOW FREQUENCY MAGNETIC FIELD ON CELL PROLIFERATION	64
<i>Mi-Na Hong, Hyung-Chul Lee, Yun-Sil Lee, Yoon-Myung Gimm, Sung Ho Myung, Jae-Seon Lee</i>	
ANALYSIS OF THE INFLUENCE OF THE HOMOGENIZATION OF VISCERAL TISSUES ON THE SAR INDUCED IN A FETUS EXPOSED TO PLANE WAVES	65
<i>Abdelhamid Hadjem, Emmanuelle Conil, Nadege Varsier, Tomoaki Nagaoka, Soichi Watanabe, Joe Wiart</i>	
CELLULAR PSYCHOLOGY: DEFINED ON AN EXTERIOR ALGEBRA USING COMPLEX NUMBERS, IT HELPS TO EXPLAIN THE VARIABLE EMF BIOEFFECTS	68
<i>Pierre Le Chapellier, Badri Matta</i>	
EXPOSURE LEVELS FROM SMARTMETERS IN RESIDENTIAL SETTINGS	70
<i>Greg Gajda, Eric Lemay, Art Thansandote</i>	
USING MODEL ORGANISM SACCHAROMYCES CEREVISIAE TO EVALUATE THE EFFECTS OF ELF-MF AND RF-EMF EXPOSURE ON GLOBAL GENE EXPRESSION	72
<i>Guangdi Chen, Deqiang Lu, Huai Chiang, Dariusz Leszczynski, Zhengping Xu</i>	
PRENATAL WHOLE-BODY EXPOSURE TO ELECTROMAGNETIC FIELD DOES NOT INFLUENCE HEMATOPOIETIC ACTIVITY IN RATS	73
<i>Koji Murono, Kazuhito Sasaki, Hironori Yamaguchi, Hiroharu Yamashita, Jianqing Wang, Shoogo Ueno, Hirokazu Nagawa, Joji Kitayama</i>	
GENE EXPRESSION ANALYSIS OF APOPTOSIS PATHWAY IN HELA S3 CELLS SUBJECTED TO 5 NS AND 120 NS-LONG ELECTRICAL PULSES	75
<i>Misako Yano, Masaya Morodomi, Keisuke Abe, Sunao Katsuki, Hidenori Akiyama</i>	
GENOTOXIC EFFECTS ON HUMAN LYMPHOCYTES AFTER FMRI SCAN – A PILOT STUDY	76
<i>Jonna Wilen, David Eriksson, Kjell Hansson Mild, Torgny Stigbrand</i>	
A DEVELOPMENT OF AN EXPOSURE SYSTEM AT 95-GHZ WITH A LENS ANTENNA	77
<i>Kensuke Sasaki, Kanako Wake, Soichi Watanabe</i>	
MOBILE PHONE USERS KNOWLEDGE OF SPECIFIC ABSORPTION RATE (SAR) – AN INTERNATIONAL SURVEY	78
<i>Jack Rowley, Chris Althaus, Michael Milligan, Dagmar Wiebusch</i>	
INFLUENCE OF AN HFEMF AT 2.45 GHZ ON MIGRATION POTENCY IN NEUTROPHIL-LIKE DIFFERENTIATED FROM HL-60 CELLS	79
<i>Eijiro Narita, Tomonori Sakurai, Yukihisa Suzuki, Masao Taki, Junji Miyakoshi</i>	
NUMERICAL ESTIMATION ON ACTIVE IMPLANTABLE MEDICAL DEVICE EMI DUE TO MAGNETIC RESONANCE WIRELESS POWER TRANSMISSION COILS	80
<i>Takashi Hikage, Yoshifumi Kawamura, Toshio Nojima</i>	
ELECTROMAGNETIC POWER DENSITY AND SAR FROM MULTIBAND-SECTOR MOBILE BASE STATION ANTENNA FOR EXPOSURE ASSESSMENT	82
<i>Junji Higashiyama, Yoshiaki Tarusawa, Teruo Onishi</i>	
SIMPLIFIED PREGNANT WOMAN MODELS FOR THE FETUS EXPOSURE ASSESSMENT	84
<i>Marjorie Jala, Emmanuelle Conil, Nadege Varsier, Abdelhamid Hadjem, Joe Wiart, Éric Moulines, Céline Lévy-Leduc</i>	
EFFECTS OF EXPOSURE TO INTERMEDIATE FREQUENCY MAGNETIC FIELDS ON NEURITE OUTGROWTH IN PC12VG CELLS	86
<i>Junji Miyakoshi, Eijiro Narita, Tomonori Sakurai, Naoki Shinohara</i>	
EFFECTS OF EXPOSURE TO 21KHZ MAGNETIC FIELDS ON ESTROGEN-REGULATED GENE EXPRESSION IN MCF-7 CELLS	87
<i>Yuki Ogasawara, Masateru Ikehata, Sachiko Yoshie, Yukihisa Suzuki, Satoshi Nakasono, Chiyoji Ohkubo, Kazuyuki Ishii</i>	
CURRENT SITUATION OF CONTACT VOLTAGES AT HOUSES IN SOUTH KOREA	89
<i>Suk Won Min, Eung Sik Kim</i>	
DEVELOPMENT OF A DUAL CHAMBER REAL-TIME BIOLUMINESCENCE DETECTION SYSTEM TO MONITOR SUBTLE CHANGES IN HSP70 PROMOTER EXPRESSION	91
<i>Esther Kim, Astrid Chamson-Reig, Michelle Belton, Jeffrey Carson</i>	
EFFECTS OF ANATOMICAL STRUCTURES OF PREGNANT FEMALE MODELS ON THE ESTIMATED SARS IN FETUSES FOR ELECTROMAGNETIC FIELD EXPOSURE	93
<i>Tomoaki Nagaoka, Kazuyuki Saito, Masaharu Takahashi, Koichi Ito, Soichi Watanabe</i>	
THE EFFECT OF ELF ELECTRIC FIELDS ON IMPLANTABLE CARDIOVERTER DEFIBRILLATORS (ICD)	95
<i>Jarold A. González, Hiroo Tarao, Leena Korpinen</i>	
3D CALCULATION OF EM FIELD EXPOSURE AND PROTECTION AREAS AROUND AMATEUR RADIO STATIONS	97
<i>Mario Pauli, Malgorzata Janson, Thorsten Kayser, Werner Wiesbeck</i>	
ON THE REDUCTION OF TRANSMIT B1 NON-UNIFORMITY AND SAR USING A SINGLE-LOOP ROTATING RF COIL	99
<i>Feng Liu, Jin Jin, Mingyan Li, Adnan Trakic, Ewald Weber, Stuart Crozier</i>	
CURRENT DISTRIBUTION IN THE BRAIN IN TRANSCRANIAL MAGNETIC STIMULATION USING ECCENTRIC FIGURE-EIGHT COILS	103
<i>Masaki Sekino, Takuya Kato, Taiga Matsuzaki, Atsushi Nishikawa, Youichi Saitoh, Hiroyuki Ohsaki</i>	

A NEW HIGH PERFORMANCES SARMETER	103
<i>Dominique Picard, Dragan Jovanovic, Luce Fouquet, Sébastien Chauvin</i>	
EFFECTS OF WHOLE BODY EXPOSURE OF 915 MHZ RFID ON SECRETARY FUNCTION OF THYROID SYSTEM IN RAT	106
<i>Young Hwan Ahn, Hae Sun Kim, Man Jeung Paik, Gwang Lee, Yun-Sil Lee, Nam Kim, Hyung-Do Choi, Byung Chan Kim, Jeong-Ki Paek</i>	
RESEARCH ON THE ROLE OF SYNAPSIN I PHOSPHORYLATION IN THE ABNORMALITY OF AMINO ACIDS NEUROTRANSMITTERS RELEASE INDUCED BY MICROW	106
<i>Xiangjun Hu</i>	
ENHANCED PROLIFERATION OF HELA S3 CELLS SUBJECTED TO NARROWBAND PULSED ELECTRIC FIELDS AND EXPRESSION OF RELATED GENES	107
<i>Nobuko Tanaka, Masahiko Yano, Chiharu Matsumoto, Keisuke Abe, Sunao Katsuki, Hidenori Akiyama</i>	
MAGNETIC FIELDS IN INTERMEDIATE FREQUENCY BAND GENERATED BY IH-HOBS	108
<i>Kanako Wake, Tomoyuki Nojima, Soichi Watanabe, Osamu Hashimoto, Yukihisa Suzuki, Masao Taki, Chiyoji Ohkubo</i>	
STUDY ON A SIMPLE DETECTION SYSTEM FOR BREAST-CANCER AT EARLY STAGE	110
<i>Mingyeong Seo, Ji-Yeon Mun, Soon-Ik Jeon, Hyung-Do Choi, Jeong-Ki Paek</i>	
TRANSIENT BEHAVIOUR OF TWO DOSIMETRIC PROBES: GSM MOBILE PHONES SAR MEASUREMENTS	112
<i>Dominique Picard</i>	
CONSTRUCTION OF A CALCULATION MODEL OF A TABLET COMPUTER FOR SAR EVALUATIONS	114
<i>Kensuke Tanaka, Akihiro Tateno, Kazuyuki Saito, Masaharu Takahashi, Koichi Ito</i>	
A STUDY OF THE SAR MEASUREMENT ERROR ON THE PULSE SIGNAL	116
<i>Dong-Geun Choi, Jaehoon Choi</i>	
ANALYSIS OF MAGNETIC FIELD DISTRIBUTION UNDER EHV AND HV DOUBLE-CIRCUIT POWER LINES WHICH CHANGE THEIR DIRECTION	118
<i>Takashi Matsumoto, Hitoshi Hirata, Hiroo Tarao, Noriyuki Hayashi, Katsuo Isaka</i>	
1,763 MHZ RADIOFREQUENCY RADIATION ACTS ON INDUCTION OF GROWTH FACTORS VIA CELLULAR SIGNALING	119
<i>Kyu-Tae Kim, Sun-Young Yoon, Seong-Jin Jo, Gahee Park, Woosung Chung, Oh-Sang Kwon, Woong-Yang Park</i>	
STOCHASTIC RESONANCE AND BROWNIAN MOTION FOR THE REDUCTION OF SUDDEN INFANT DEATH SYNDROME (SIDS)	120
<i>Adan Cervantes</i>	

SESSION:O5 – DOSIMETRY MRI

EXPOSURE EVALUATION OF THERAPEUTIC MAGNETIC FIELD MATS	120
<i>Valerio De Santis, Mark Douglas, Jagadish Nadakuduti, Stefan Benkler, Niels Kuster</i>	
IMPROVED ASSESSMENT OF COMPLIANCE WITH ELECTROMAGNETIC EXPOSURE LIMITS UP TO 100 KHZ	123
<i>Valerio De Santis, Mark Douglas, Jagadish Nadakuduti, Stefan Benkler, Niels Kuster</i>	
HEALTH CARE PERSONNEL EXPOSURE TO STATIC MAGNETIC FIELDS VERSUS TYPE OF MAGNETIC RESONANCE SCANNER	125
<i>Jolanta Karpowicz</i>	
INTRACEPHALIC VERSUS EXTRACEPHALIC ELECTRODE MONTAGES DURING TRASCRIANIAL DIRECT CURRENT STIMULATION: COMPUTATIONAL EVALUATION	127
<i>Marta Parazzini, Elena Rossi, Serena Fiocchi, Ilaria Liorni, Alberto Priori, Paolo Ravazzani</i>	
A STUDY ON DIELECTRIC MEASUREMENT METHODS FROM INTERMEDIATE FREQUENCIES TO MILLIMETER-WAVE FREQUENCIES	129
<i>Soichi Watanabe, Kensuke Sasaki, Maya Mizuno, Kanako Wake, Kaori Fukunaga, Haruki Segawa, Yuta Ishimura, Osamu Hashimoto</i>	
INHOMOGENEITY IN MAGNETIC FIELDS OF INCUBATORS IS A CONFOUNDER FOR BIOLOGICAL VARIABILITY AND EXPERIMENTAL REPRODUCIBILITY	130
<i>Lucas Portelli, Theodore Schomay, Frank Barnes</i>	

SESSION: O6 - ELECTROPORATION

MOLECULAR DYNAMICS SIMULATIONS OF IONIC TRANSPORT IN POPC FIELD-STABILIZED NANOSCALE ELECTROPORES	131
<i>Ming-Chak Ho, Maura Casciola, Zachary A. Levine, P. Thomas Vernier</i>	
MECHANISMS OF THE CROSSING OF LIPID BILAYERS BY SIRNA : AN EXPERIMENTAL AND NUMERICAL STUDY	134
<i>Marie Breton, Lucie Delemotte, Mounir Tarek, Lluís M. Mir</i>	
INDUCTION OF ROS IN CELLS AND MEDIA BY NANOSECOND ELECTRIC PULSES	135
<i>Andrei Pakhomov, Vera Khorokhorina, Angela Bowman, Raminta Rodaite-Riševiciene, Gintautas Saulis, Shu Xiao, Olga Pakhomova</i>	
ELECTROPORATION OF BONE METASTASES. NUMERIC SIMULATION FOR OPTIMIZING A THERAPEUTIC PROCESS	136
<i>Bruno Biscaglia, Nicola Francesco Tallarino</i>	

POTENTIATION OF ELECTROPORATIVE DRUG UPTAKE AND CELL KILLING BY A SPLIT-DOSE APPLICATION OF 100 μS ELECTRIC PULSES	139
<i>Olga Pakhomova, Betsy Gregory, Andrei Pakhomov</i>	

VERSATILE MICROELECTRODE ASSEMBLY FOR NANOSECOND PULSE DELIVERY TO CELL SUSPENSIONS	140
<i>Yu-Hsuan Wu, Delia Arnaud-Cormos, Maura Casciola, Philippe Leveque, Jason M. Sanders, P. Thomas Vernier</i>	

SESSION: O7 – IN-VIVO

EFFECT OF CHRONIC EXPOSURE TO RADIOFREQUENCY ELECTROMAGNETIC FIELDS ON ENERGY FLOW AND VASOMOTRICITY IN JUVENILE RATS	142
--	-----

Amandine Pelletier, Rene De Seze, Stéphane Delanaud, Gyorgy Thuroczy, Véronique Bach, Jean-Pierre Libert, Nathalie Loos

THE CONTINUOUS EXPOSURE OF 60 HZ MAGNETIC FIELDS ON TESTICULAR FUNCTION IN SPRAGUE-DAWLEY RAT FOR 20 WEEKS	143
---	-----

Hee-Sung Kim, Hye-Jin Jang, Sang-Kon Lee, Byung-Jae Park, Moon-Koo Chung, Sung Ho Myung, Nam Kim, Yoon-Myoung Gimm, Yoon-Won Kim

NOCICEPTIVE BEHAVIOUR IN MICE IS AFFECTED BY EXPOSURE TO WEAK ELFMF: 33 NT AT 30 HZ	143
--	-----

Frank Prato, John Robertson, Dawn Desjardins-Holmes, Lynn Keenlside, Janice Demoor, Robert Stodilka, Alex Thomas

AN IN-VIVO EXPOSURE SYSTEM FOR ELF MAGNETIC FIELD EXPOSURE	145
---	-----

Myles Capstick, Yijian Gong, Niels Kuster

SESSION: O8 – HUMAN & CLINICAL

PERCEPTION OF RF FIELDS EMITTED FROM SMART PHONES	148
--	-----

Min Kyung Kwon, Joon Yul Choi, Sung Kean Kim, Tae Keun Yoo, Deok Won Kim

THRESHOLD FOR A SYSTEMATIC NEUROPHYSIOLOGICAL RESPONSE TO 50 AND 60 HZ MAGNETIC FIELDS OF UP TO 50 MILLITESLA	150
--	-----

Alexandre Legros, Julien Modolo, Daniel Goulet, Michel Plante, Martine Souques, François Deshamps, Frank Prato, Jacques Lambrozo, Alex Thomas

MODULATION OF THE SKIN VASOCONSTRICTOR TONE BY 900 MHZ GSM RADIOFREQUENCY FIELD	152
--	-----

Nathalie Loos, Rene De Seze, Valérie Brenet-Dufour, Rania Ghosn, Sophie Liabeuf, Brahim Selmaoui, Gyorgy Thuroczy

ACUTE EXPOSURE TO MOBILE PHONE AND ASSESSMENT OF INTERNAL CEREBRAL CIRCULATION: A TRANSCRANIAL DOPPLER STUDY	153
---	-----

Rania Ghosn, Gyorgy Thuroczy, Nathalie Loos, Valérie Brenet-Dufour, Sophie Liabeuf, Rene De Seze, Brahim Selmaoui

EFFECT OF PULSED GSM 900 MHZ EXPOSURE ON POLYSOMNOGRAPHY BASED SLEEP QUALITY: AN INTRA- AND INTERINDIVIDUAL PERSPECTIVE	155
--	-----

Heidi Danker-Hopfe, Peter Anderer, Hans Dorn, Thomas Bolz, Cornelia Sauter

SESSION: PLENARY 3 – RISK COMMUNICATION

RISK COMMUNICATION AND RADIATION	156
---	-----

Ray Kemp

ANALYSIS OF MEDIA COMMENT ON THE EMF HEALTH DEBATE AND BASE STATION DEPLOYMENT IN AUSTRALIA	156
--	-----

Roslyn Young

ADDRESSING COMMUNITY CONCERNS ABOUT MOBILE PHONE INFRASTRUCTURE USING AN INDUSTRY CODE OF PRACTICE AND COMPLIANCE SYSTEM	159
---	-----

Ray McKenzie, Mike Wood, Howard Game, Trudy Schmidt

RISK COMMUNICATION IN RISK CONTROVERSIES	162
---	-----

Peter Wiedemann

SESSION: PB – POSTER SESSION B + MORNING REFRESHMENTS

SAR OTA (OVER THE AIR), A STEP TOWARD ASSESSING REAL EXPOSURE	163
--	-----

Zaher Mahfouz, Azeddine Gati, David Lautru, Joe Wiart, Victor Fouad

EFFECTS OF UVA RADIATION ON GROWTH OF RAW 264.7 CELLS	164
--	-----

Toshitaka Ikehara, Mutsumi Aihara, Zehong Su, Akira Takahashi, Masatake Akutagawa, Yohsuke Kinouchi

EVALUATION OF THE SAR INDUCED BY MULTI TRANSMITTERS FROM A MOBILE PHONE	165
--	-----

Zaher Mahfouz, Azeddine Gati, David Lautru, Joe Wiart, Victor Fouad

MICROWAVE DISINFESTATIONS OF BIOLOGICAL PESTS. STRUCTURAL INVESTIGATION ON MODERN AND ANCIENT ARTWORKS	167
---	-----

Alexandra Albulnia, Bruno Bisceglia, Francesco Chiadini, Alfonso Grassi, Antonio Scaglione

CARDIO-RESPIRATORY CHANGES BY 60 HZ MAGNETIC FIELDS IN ADULTS AND TEENAGERS	168
--	-----

Sung Kean Kim, Min Kyung Kwon, Jae Lim Choi, Tae Keun Yoo, Deok Won Kim

IMPROVEMENT OF A PIPE TYPE UVA-LED STERILIZER USING A CONDENSER LENS	171
---	-----

Masachika Ishizaki, Yohsuke Manabe, Mutsumi Aihara, Akira Takahashi, Masatake Akutagawa, Takahiro Emoto, Yohsuke Kinouchi, Toshitaka Ikehara

CURRENT STATUS OF EMF BIOEFFECT STUDY IN CHINA	173
<i>Zhengping Yu, Zhou Zhou, Lei Zhang, Guangbin Zhang, Min Zhong</i>	
MEASUREMENT OF PUBLIC EXPOSURE TO ELECTROMAGNETIC FIELDS IN AN URBAN AREA IN CHONGQING, CHINA	173
<i>Lei Zhang, Zhou Zhou, Yuan Wang, Xiaobo Shi, Guangbin Zhang, Zhengping Yu</i>	
SAR VARIATIONS IN WIRELESS DATA COMMUNICATION TERMINALS CAUSED BY HOST DEVICES	174
<i>Teruo Onishi</i>	
EFFECTS ON DNA DAMAGE BY 60-HZ ELECTROMAGNETIC FIELD EXPOSURE IN COMBINATION WITH IR, HYDROGEN PEROXIDE, OR C-MYC OVEREXPRESSION	175
<i>Yeung Bae Jin, Seo-Hyun Choi, Jae-Seon Lee, Jong-Il Choi, Ju-Woon Lee, Seung-Cheol Hong, Sung Ho Myung, Yun-Sil Lee</i>	
A CASE STUDY FOR APPLICATION ON ELF-EMFS RISK COMMUNICATION PROGRAM IN KOREA	176
<i>Yoon-Shin Kim, Yong-Sung Cho, Seung-Cheol Hong, Dae-Young Joo</i>	
MODULATION OF HYDROGEN PEROXIDE PRODUCTION IN CELLULAR SYSTEMS BY LOW LEVEL MAGNETIC FIELDS	177
<i>Carlos Martino, Pablo Castello</i>	
EFFECT OF TISSUE CONDUCTIVITY ON INTERNAL BODY RESISTANCES OF NUMERICAL HUMAN MODEL AT POWER FREQUENCY	178
<i>Hiroo Tarao, Noriyuki Hayashi, Leena Korpinen, Jarold A. González, Takashi Matsumoto, Katsuo Isaka</i>	
EFFECTS OF WI-FI EXPOSURE ON THE BLOOD-BRAIN BARRIER AND MOLECULAR MARKERS IN THE BRAINS OF AGED AND ALZHEIMER'S DISEASE MICE	179
<i>Isabelle Lagroye, Hiroshi Masuda, Nathalie Macrez, Nathalie Biendon, Florence Poulletier De Gannes, Emmanuelle Haro, Gilles Ruffie, Murielle Taxile, Jean-Luc Morel, Annabelle Hurtier, Bernard Veyret, Bruno Bontempi</i>	
CASE STUDY: RADIO FREQUENCY EXPOSURE MEASUREMENTS OF WI-FI DEVICES	180
<i>Josette Gallant, Hughes Nappert</i>	
EFFECT OF 1.8 GHZ RF RADIATION ON THE UBIQUITIN-RELATED PROTEIN EXPRESSION IN THE LENS EPITHELIAL CELLS	181
<i>Yibo Yu, Yidong Zhang, Jiliang He, Deqiang Lu, Ke Yao</i>	
BIOLOGICAL EFFECT OF PEF-INDUCED TRANSIENT THERMAL SHOCK ON HELA CELLS	181
<i>Shinya Moriyama, Kazunori Mitsutake, Yumi Kishita, Sunao Katsuki, Hidenori Akiyama</i>	
INVERSE FIELD-BASED APPROACH FOR THE EVALUATION OF ELECTROMAGNETIC FIELDS AND ITS APPLICATION IN LOCAL SNR-SHIMMING FOR MRI	183
<i>Jin Jin, Feng Liu, Ewald Weber, Stuart Crozier</i>	
EFFECTS OF ABDOMINAL LOCAL EXPOSURE OF INTERMEDIATE FREQUENCY (21KHZ) MAGNETIC FIELDS ON FETAL DEVELOPMENT IN RATS	188
<i>Akira Ushiyama, Shin Ohtani, Machiko Maeda, Yuki Hirai, Yukihisa Suzuki, Keiji Wada, Naoki Kumugita, Chiyoji Ohkubo</i>	
IMPACTS OF ARBITRARY RADIOFREQUENCY EXPOSURE RESTRICTIONS ON OPERATION OF MOBILE NETWORKS	189
<i>Jack Rowley, Peter Zollman, Brent Gerstle, Lars-Eric Larsson</i>	
MICROWAVE TREATMENT OF LYCOPERSICON ESCULENTUM L. CYTOLOGICAL AND HISTOLOGICAL ALTERATIONS	189
<i>Anna Maria Bellone, Bruno Bisceglia, Stefano Castiglione, Francesco Chiadini, Angela Cicatelli, Desirée Galizia, Michele Grimaldi, Antonio Scaglione</i>	
ANALYSIS OF ION INFLUX AND EXPRESSION OF CERAMIDE IN HELA S3 CELLS SUBJECTED TO NANOSECOND PULSED ELECTRIC FIELDS	191
<i>Keisuke Abe, Masahiko Yano, Kazunori Mitsutake, Misako Yano, Masaya Morodomi, Sunao Katsuki, Hidenori Akiyama</i>	
COMPARISON THE PORTABLE SERVICE PLATFORMS INFLUENCE TO ELECTRIC FIELD EXPOSURE AT 110 KV SUBSTATIONS	193
<i>Rauno Pääkkönen, Harri Kuisti, Jarold A. González, Hiroo Tarao, Fabriziomaria Gobba, Leena Korpinen</i>	
ELECTROMAGNETIC RADIATION IN THE COMMUNITY	195
<i>Lyn McLean</i>	
FUZZY NEAR FIELD PATTERNS OF THE RESPONSE OF MC3T3-E1 CELL LINE UPON THE MICROWAVE EXPOSURE AT 1.8GHZ	196
<i>Shen Cherng, Hsien-Chiao Teng</i>	
CAN WIND TURBINES AFFECT CHILDREN'S HEALTH?	198
<i>Moyra Black, David Black</i>	
STUDY ON POWER FREQUENCY MAGNETIC FIELD MITIGATION METHOD BASED ON PASSIVE LOOP	198
<i>Byeongyoon Lee, Yeungyu Cho, Sung Ho Myung, Dongil Lee, Yunseog Lim, Sangyun Lee</i>	
DESIGN OF A COMPACT TAPERED SLOT ANTENNA FOR BRAIN IMAGING SYSTEM	199
<i>Juneseok Lee, Soonyong Lee, Kyeol Kwon, David Ireland, Jaehoon Choi</i>	
THE POWER UTILITIES OF A 154KV SUBSTATION AND OF MAGNETIC-FIELD EMISSIONS IN THE WORKPLACE ENVIRONMENT	201
<i>Seung-Cheol Hong, Yeonjun Jeong, Gi Young Kim, Chun In Ae, Yun Jin Lee, Sung Ho Myung, Yoon-Shin Kim</i>	
CHANGES IN SEX RATIO OF MENINGIOMA: HAS FEMALE RISK INCREASED FOR MENINGIOMA FROM EXPOSURES TO ELECTROMAGNETIC RADIATION?	203
<i>L. Lloyd Morgan, Devra Davis, Michael Kundi</i>	
DESIGN AND SAR ANALYSIS OF DUAL PATCH MONOPOLE ANTENNA FOR MOBILE COMMUNICATION	205
<i>Joo-Hun Yang, Seungwoo Lee, Nam Kim</i>	

CHARACTERIZATION OF ELF-MF EMISSION FROM SOLAR ELECTRIC GENERATION SYSTEM	207
<i>Gi Young Kim, Yeonjun Jeong, Yun Jin Lee, Chun In Ae, Dae-Young Joo, Yoon-Shin Kim, Seung-Cheol Hong</i>	
WORKERS EXPOSURE. DIRECTIVE 2004/40/EC OF THE EUROPEAN PARLIAMENT	209
<i>Bruno Bisceglia</i>	
A MEASUREMENT OF EMF DISTRIBUTIONS USING FREEHAND SCANNING METHOD BY WIIMOTE	210
<i>Ken Sato, Hiroaki Kawata, Yoshinori Kashimura, Yoshitsugu Kamimura</i>	
SPECIFIC ELECTROMAGNETIC EFFECTS OF MICROWAVE RADIATION ON BACTERIA	212
<i>The Hong Phong Nguyen, Yury Shamis, Rodney Croft, Russell J. Crawford, Elena P. Ivanova</i>	
THE RELATIONSHIP BETWEEN COGNITION FUNCTION AND HIPPOCAMPUS STRUCTURE AFTER LONG-TERM MICROWAVE EXPOSURE	215
<i>Rui-Yun Peng, Li Zhao, Guo-Shan Yang</i>	
ELECTROMAGNETIC FIELD MEASUREMENT AROUND MOBILE BASE STATIONS IN KOREA	216
<i>Hyun-Bong Kim, Wan Ki Kim, Yeong-Su Lee, Dong-Seong Lee, Jin-Young Kwon</i>	
ANALYSIS OF ELECTRONIC EQUIPMENT USED FOR INTENTIONAL ELECTROMAGNETIC INTERFERENCES WITH REGARD TO HUMAN EXPOSURE	217
<i>Stefan Kampusch, Andreas Weinfurter, Franco Fresolone, Georg Neubauer</i>	
EFFECTIVE MAGNETIC FIELD MITIGATION OF NEUTRAL GROUND REACTOR	218
<i>Tae-Young Kim, Jeong-Ill Hwang, Geun-Taek Yeo, Yun-Seog Lim, Sang-Yun Lee</i>	
ANALYSIS OF THE ACTIVITY OF NEURONAL NETWORKS EXPOSED TO THE GSM-1800 SIGNAL	219
<i>Daniela Moretti, Noëlle Lewis, André Garenne, Florence Poulletier De Gannes, Emmanuelle Haro, Isabelle Lagroye, Bernard Veyret</i>	
ELECTRIC & MAGNETIC FIELDS STANDARDS & GUIDELINES - COMPLIANT ASSESSMENT METHODOLOGY FOR NON-UNIFORM FIELDS	220
<i>Thanh Doan</i>	
STUDIES ON UNCERTAINTY AND CALIBRATION OF SAR MEASUREMENTS FOR WIRELESS COMMUNICATION DEVICES	221
<i>Lira Hamada, Yukihiko Miyota, Hideo Kurokawa, Hiroyuki Asou, Soichi Watanabe, Katsumi Fujii, Yasushi Matsumoto</i>	
PULSED TEMPERATURE STIMULUS LIMITS GROWTH OF FIBROSARCOMA HT1080 CELLS	222
<i>Lucas Portelli, Aditya Kausik, Frank Barnes</i>	
INFLUENCE OF THE DIELECTRIC PROPERTIES OF THE TISSUE EQUIVALENT LIQUID ON THE RADIATING ANTENNA MATCHING FOR SAR MEASUREMENTS	222
<i>Dominique Picard</i>	
ASSESSING INDUSTRY WORKERS EXPOSURE TO NON-UNIFORM MAGNETIC FIELD BY CALCULATIONS AND MEASUREMENTS	224
<i>Jolanta Karpowicz, Patryk Zradzinski, Krzysztof Gryz</i>	

SESSION: PLENARY 4 – WINDFARMS AND PUBLIC HEALTH

WIND FARMS AND PUBLIC HEALTH - BIOELECTROMAGNETICS - AND MORE	227
<i>David Black</i>	

SESSION: O09 – ELF DOSIMETRY

CALCULATED INDUCED ELECTRIC FIELDS AND CURRENT DENSITIES IN CHILD HEAD MODELS FROM EXPOSURE TO MOBILE PHONES	229
<i>Richard Findlay, Peter Dimbylow, Carolina Calderon, Myron Maslanyj</i>	
DOSIMETRIC AND EXPOSURE REFERENCE LEVELS IN GUIDELINES/STANDARDS FOR LOW-FREQUENCY ELECTRIC & MAGNETIC FIELDS	230
<i>Thanh Doan, Robert Kavet, Akimasa Hirata</i>	
EXPOSURE PROFILES FROM PERSONAL MEASUREMENTS OF RADIOFREQUENCY ELECTROMAGNETIC AND EXTREMELY LOW FREQUENCY MAGNETIC FIELDS	231
<i>John Bolte, Tessa Eikelboom</i>	
ELF EXPOSURE FROM GSM AND UMTS MOBILE PHONES	232
<i>Marie-Christine Gosselin, Sven Kuehn, Niels Kuster</i>	

SESSION: O10 – POLICY + ELF EPI

THE RELATIONSHIP OF RESIDENTIAL MAGNETIC FIELDS TO CONTACT VOLTAGES IN U.S. ELECTRICAL SYSTEMS	234
<i>Robert Kavet</i>	
RISK COMMUNICATION STRATEGIES AND IMPLEMENTATION: KEY LESSONS FROM AUSTRALIAN EXPERIENCE OF MOBILE TELECOMS	235
<i>Ray Kemp</i>	
CANCER RISK IN THE POPULATIONS NEAR POWER LINES - A CORRELATION STUDY IN KOREA	237
<i>Yoon-Ok Ahn, Yoon-Myoung Gimm, Seung-Cheol Hong, So-Hee Park</i>	

SESSION: O11 – ELF/IF/PULSED

EM EXPOSURE ASSESSMENT OF WIRELESS POWER CHARGING SYSTEMS..... 239
Jagadish Nadakuduti, Mark Douglas, Niels Kuster

**STUDY ON THE INDUCED ELECTRIC FIELDS IN A BIOLOGIC OBJECT BY ONLY INCIDENT
MAGNETIC FIELDS IN THE QUASI-STATIC APPROXIMATION** 241
Sangwook Park, Kanako Wake, Soichi Watanabe

**CALCULATING THE INDUCED ELECTRIC FIELDS IN DEEP BRAIN REGIONS BY TWO SEPARATE
CIRCULAR COILS** 243
Mai Lu, Shoogo Ueno

SESSION: O12 – IN-VITRO (ELF)

THE BIOLOGICAL EFFECTS OF 50 HZ MAGNETIC FIELD ON CHINESE HAMSTER LUNG CELLS 246
Yunyun Shen, Kan Zhu, Qingfeng Chen, Qian Cheng, Zhengping Xu, Qunli Zeng

**EFFECTS OF EXTREMELY LOW-FREQUENCY ELECTROMAGNETIC FIELDS ON MOUSE
HIPPOCAMPAL NEUROGENESIS**..... 247
*Claudio Grassi, Lucia Leone, Roberto Piacentini, Daniele Mezzogori, Saviana Barbatì, Alessia Mastrodonato, Salvatore Zaffina,
Maria Podda*

**EFFECTS OF EXTREMELY LOW-FREQUENCY MAGNETIC EXPOSURE ON PATHOGENESIS OF
ALZHEIMER’S DISEASE IN ALUMINUM OVERLOADED RAT** 248
Cheng Zhang, Li Yue, Chao Wang, Tao Song

SESSION: O13 – RF DOSIMETRY – ABSORPTION I

**TEMPERATURE ELEVATION IN HUMAN FETUSES AT 13 WEEKS, 18WEEKS, AND 26WEEKS OF
GESTATION DUE TO A WIRELESS RADIO TERMINAL** 250
Akihiro Tateno, Kazuyuki Saito, Tomoaki Nagaoka, Soichi Watanabe, Masaharu Takahashi, Koichi Ito

**INFLUENCE OF THE INCIDENT ANGLE OF SINGLE PLANE-WAVES ON THE ORGAN SPECIFIC
AVERAGED SAR AT 950 MHZ** 252
Arno Thielens, Gunter Vermeeren, Wout Joseph, Luc Martens

ORGAN SPECIFIC AVERAGED SAR NEAR MULTIPLE-FREQUENCY BASE STATION ANTENNAS 255
Arno Thielens, Gunter Vermeeren, Divya Kurup, Wout Joseph, Luc Martens

**MEASUREMENT OF THE ELECTROMAGNETIC FIELD EXPOSURE IN INDOOR ENVIRONMENTS BY
SPECTRUM ANALYZER AND EXPOSIMETERS** 257
Gunter Vermeeren, Francis Goeminne, Wout Joseph, Luc Martens

**AUSTINMAN AND AUSTINWOMAN: HIGH FIDELITY, REPRODUCIBLE, AND OPEN-SOURCE
ELECTROMAGNETIC VOXEL MODELS** 259
*Jackson Massey, Cemil Geyik, Natcha Techachainiran, Che-Lun Hsu, Robin Nguyen, Trevor Latson, Madison Ball, Emin Celik, Ali
Yilmaz*

SESSION: 014 – MECHANISM & THEORY I

A NUMERICAL FRAMEWORK FOR MODELING ELECTROTAXIS IN BONE CELL CULTURES..... 262
Juan Carlos Vanegas Acosta, Vito Lancellotti & Peter Zwamborn

**EVIDENCE FOR CHANGES IN BRAIN SYNAPTIC PLASTICITY INDUCED BY EXPOSURE TO
EXTREMELY LOW-FREQUENCY MAGNETIC FIELDS** 265
Julien Modolo, Alex Thomas, Robert Stodilka, Alexandre Legros

**AMOEBAL GALVANOTAXIS SUPPORTS AN ELECTROMECHANICAL TRANSDUCTION MECHANISM
FOR ELECTRIC FIELDS** 268
Francis Hart, John Palisano

**A MODEL BASED ON PARAMETRIC AMPLIFICATION FOR WEAK ELECTROMAGNETIC FIELD
BIOEFFECTS** 270
Chathurika Abeyrathne, Malka Halgamuge, Peter Farrell, Efstratios Skafidas, David Muehsam

**VERSATILE SIMULATION PLATFORM FOR THE INVESTIGATION OF EM-NEURON INTERACTIONS
IN ANATOMICAL MODELS** 271
Johanna Wolf, Esra Neufeld, Marie-Christine Gosselin, Niels Kuster

SESSION: ENA – ENA WORKSHOP

AN AUSTRALIAN MEASUREMENT SURVEY OF RF AND ELF EMISSIONS FROM SMART METERS 273
Chris Zombolas, Andrew Wood

RISK COMMUNICATION LESSONS FOR THE DEPLOYMENT OF ‘SMART METERS’ 274
Ray Kemp

**EXTREMELY LOW FREQUENCY (ELF) MAGNETIC FIELDS AND HUMAN HEALTH SINCE THE 2007
REVIEWS** 275
Mark Elwood

MEDICAL APPLICATIONS OF ELECTROMAGNETIC FIELDS	275
<i>Shoogo Ueno</i>	
THE EUROPEAN OCCUPATIONAL EMF EXPOSURES DIRECTIVE	277
<i>Philip Chadwick</i>	
EMF HEALTH ASSESSMENT RESEARCH AT THE ELECTRIC POWER RESEARCH INSTITUTE	278
<i>Gabor Mezei</i>	

SESSION: O15 – RF DOSIMETRY – ABSORPTION II

NUMERICAL DOSIMETRY OF RAT IN A REVERBERATION CHAMBER FOR FREE-RUNNING EXPOSURE SYSTEM USING HYBRID MOM-FDTD METHOD	278
<i>Jerdvisanop Chakarothai, Jianqing Wang, Osamu Fujiwara, Kanako Wake, Soichi Watanabe</i>	
AN INTERLABORATORY COMPARISON OF SAR CALCULATIONS USING A CAD PHONE: A NEW STEP TOWARDS STANDARDIZED PROCEDURES	280
<i>Vikass Monebhurrin, Yannis Braux, Mikhail Kozlov, Winfried Simon, Tilmann Wittig</i>	
SYSTEM FOR FAST, LARGE AREA, SPECTRAL RADIOFREQUENCY POWER DENSITY ESTIMATION	282
<i>Jimmy Estenberg, Torsten Augustsson</i>	
WHOLE-BODY AVERAGED SAR MEASUREMENT BASED UPON CYLINDRICAL FIELD SCANNING FOR UHF PLANE WAVE IRRADIATION OF PRECISE HUMANS	284
<i>Yoshifumi Kawamura, Takashi Hikage, Toshio Nojima, Tomoaki Nagaoka, Soichi Watanabe</i>	
VALIDATION OF THE EXPERIMENTAL WHOLE-BODY SAR ASSESSMENT METHOD IN A COMPLEX INDOOR ENVIRONMENT	286
<i>Aliou Bamba, Wout Joseph, Gunter Vermeeren, Emmeric Tanghe, Luc Martens</i>	
DIFFERENTIAL EFFECTS OF MAGNETIC FIELDS IN VITRO AND IN VIVO	288
<i>Carlos Martino, Lucas Portelli, Gail Ackerman, Frank Barnes</i>	
CAN THERMAL MECHANISMS EXPLAIN THE RADIOFREQUENCY EFFECTS ON THE HUMAN ELECTROENCEPHALOGRAM?	288
<i>Rodney Croft, Ray McKenzie</i>	
MECHANICAL SIMULATION BASED POSTURE CHANGES IN HIGH RESOLUTION ANATOMICAL MODELS	289
<i>Dominik Szczerba, Esra Neufeld, Marie-Christine Gosselin, Niels Kuster</i>	

SESSION: PLENARY 5 – DEVELOPMENTS IN EPIDEMIOLOGY

EPIDEMIOLOGICAL STUDIES ON MOBILE PHONE USE AND THE RISK OF CANCER - RECENT STUDIES	291
<i>Joachim Schuz</i>	
NEUROCOGNITIVE EFFECTS IN SCHOOLCHILDREN USING MOBILE PHONES AND THE MOBI-KIDS STUDY	291
<i>Malcolm Sim</i>	
ELF MAGNETIC FIELDS AND CHILDHOOD LEUKAEMIA: CURRENT PERSPECTIVES AND RESEARCH CONTEXT	291
<i>John Dockerty</i>	
Author Index	