Electromagnetic fields

at home, at work

W O R K S H O P

characteristics, health effects, how to properly detect problem sources and identify effective mitigation

Dr. **Andrew Michrowski**, instructor

WHO SHOULD ATTEND: health practitioners, architects, engineers, electricians, the responsible laypersons willing to improve their lifestyle.

Electromagnetic spectrum; ***bioeffects***: *electric, magnetic, electromagnetic fields thermal, linear/non-linear effects; absorption characteristics; scalars; melatonin link;* ***symptoms*** *for types of exposure;* ***transmission & propagation*** *of electromagnetic signals; harmonics, transients, damping; exposure situations; emission magnification and reduction;* ***guidelines*** *– their development; emerging regulations;* ***exposure hygiene***: *who should be protected – at what age, where (school, bedroom, long-term usage sites, medical device usage);* ***wiring*** *- types, code, grounding,* ***typical problems / inexpensive solutions***; *critical exposures: workstation and therapy area environment; rural environments; measuring equipment: electrical, electrostatics/ion discrimination, magnetic (dosimeters, gaussmeters, single axis and multi-pole probes), static magnetic fields; RF & MW, ammeter, electrical resistivity;* ***protocol*** *and procedure;* ***tracing***; ***geopathics*** *and health – situations and health effects;* ***hypersensitivity*** *– allergen link with electromagnetics; subtle energy interface; interface of medication; subtle energy therapeutics;* ***personal protection devices*** *– what to expect, their rationale.*

Friday evening is introductory and for the general public; **Saturday**, **Sunday** sessions are directed at **professional training**. Your professional society may grant education credits for the workshop. **Certificate** issued, at request, upon successful exam.

TORONTO September 28 - 30, 2007

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WORKSHOP SYNOPSIS

Friday *(introductory)*

Electromagnetic spectrum; its use by sector, mode of transmission as dependent on frequency and wavelength, dispersion; **Nomenclature**: Hertz, Tesla, Gauss, Watt/cm^2. **Range of bioeffects**: electric, magnetic, electromagnetic; differentiation between thermal and non thermal, linear and non-linear; absorption characteristics; scalar electromagnetics; the melatonin connection. **Transmission & distribution**: wiring, transmission lines,antennae. **Concept of circuits**. **Voltage/amperage**. **Harmonics, transients**, beating of 2 or more frequencies [F1 + F2 = (F1 + F2) + (F1 - F2) / 30 + 10 = 40 + 20]. **How magnetic fields are magnified**: spacing of conduits (knob and tube wiring), loop circuits, re-radiation phenomena. **How magnetic fields may be reduced**: phasing, compacting wires; annulling; counteractors; "white noise" formula; shock bow effect / Faraday effect; absorption. **Type of situations encountered**: wiring configuration -- knob & tube, series, grounding wires, transmission lines, shielding with *MuMetal.* **Guidelines** based on independent European experience -- how developed in early 1980s. **New regulations** coming along: 2mG, preference for 1mG. **Exposure hygiene**: who should be protected, as of what age, where (school, bedroom, long-term usage). **Symptoms to look out for** (powerline frequencies: German statistics; for microwave: disorientation, incoherence immune system breakdown)

Saturday (*practical*)

Basic wiring configurations: panel, sub-panel (good & to avoid). **Electrical Code** grounding requirements. **Purpose of grounding systems**. **Mitigation**: sundry fields; water main problematics, re-grounding, transformer poles, some neighbourhood dynamics; isolation of critical areas - bedroom, etc. **Work environments & EMI** - classroom dynamics, farm environments (general and barns), supercomputer facilities.

Sunday (*hands-on experience*)

Equipment: electrical, electrostatics / ion discrimination, magnetic (dosimeters, gaussmeters, single and multi-pole probe), static magnetic fields; RF & MW; ammeter. **Protocol and procedure of analysis of situation** (indoor/outdoor, peripheral, walk through, profiles). **Tracing**. **Determination of panel-driven EMF**. **Balance equation of grounding returns**: neutral, grounding wire, TV, Cable. **Hands-on experience**.

Instructor: A. Michrowski

Dr. Andrew Michrowski studied at the faculties of Architecture and Urbanism at the **Politecnico di Milano**, Milan, Italy, where he received his *Dott. Arch.* degree with honours. He has served with the Department of **Indian and Northern Affairs** as Chief Planner, followed by senior positions with the **Secretary of State** of Canada as forecaster, analyst and program evaluator.

He has authored such papers as, *Solutions to the global environmental crisis* (Address at the **United Nations**),*The electromagnetic dimension of indoor environments* (5th International conference on Indoor Air), *Nuclear fuel waste management and disposal concept* and *Practical EMF pointers.* He has edited, co-edited such books as: *New energy technology*, *Basis of electromagnetic hygiene*, *Studying problems associated with video display systems*, *The ELF factor: selected bibliography*, *Emerging energy science* (also developed into an electronic information database of same name), *VDT sources: the ELF factor, selected references*, and *An ELF primer*.

He was scientific advisor of a national prime-time TV special, *Nikola Tesla - the forgotten genius*, special advisor to the producer of the film, *The secret of Nikola Tesla* (with Orson Welles), scientific advisor for the award-winning (best United Kingdom documentary of the year) **BBC Horizon/NOVA** series production, *The mysterious Mr. Tesla;* and, producer of the investigative TV documentary, *The question of video display terminals.*

He lectures before scientific and engineering societies and makes presentations on current scientific issues before concerned groups. Since 1991, he has been providing extended workshops, some of which lead to certificates, on EMF with a view of enabling participants to identify and to mitigate EMF problems in the built environment. Since 1993 he is head of the study team analyzing electromagnetic fields in Canadian houses for **Canada Mortgage and Housing Corporation**.