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# Miclaus Simona

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She has thoroughly studied the domain of high frequency electromagnetic fields. She participated at a series of research projects (obtained by competition), being either project manager, or member of the research team. She is involved in collaboration activities with foreign research centers on the issue of electromagnetic compatibility. In this project, she will be responsible for: studying the electromagnetic radiation in complex propagation environments for JTRS specific sources of emission; development of algorithms regarding the spatial location of emission sources in order to protect the personnel from damaging radiations; proposing recommendations regarding the standards regulating the exposure of personnel to JTRS specific radiation sources; management tasks.

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## DOMAINS OF PROFICIENCY:

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- Propagation of RF signals in dielectric environments.
- Project management.
- Interaction of VHF electromagnetic fields with living beings.
- Digital processing of radio communications signals.

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## SIGNIFICANT RESULTS:

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- Development of systems measuring the exposure and the quantification of the absorption of high frequency electromagnetic energy by experimental measurements, in collaboration with the Laboratory for Microwave Techniques, National Research and Development Institute for Isotropic and Molecular Technologies, Cluj-Napoca.
- Establishing the Dosimetric Laboratory for RF and Microwave Electromagnetic Fields at The Land Forces Academy, which is endowed with modern electronic and IT equipment.
- Establishing and developing of a national research network in the field of HF bio-electromagnetics and connecting it to the similar European network by reporting the results obtained by the Romanian scientists to the European EMF-NET.

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## PUBLISHED PAPERS:

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1. **Miclaus S.**, Bechet P., Demeter S., Olariu O., *Modulation Influence on RF Fields Power Deposition Inside Biological Objects: A Dosimetric Analysis on Layered Planar and Spherical Models*, Proceedings of the Internat. Congress of the International Radiation Protection Association, ISBN 84-87078-05-2, Madrid, Spain, 23-28 May 2004, – journal indexed in the Google Scholar database.
2. Bechet P., Mitran R., **Miclaus S.**, *An Analysis of Frequency Hopping Radio Networks*, *Overvoltages in Power, Electronic, Computer and Engineering*, pp. 121-124, 2005 - journal indexed in the ISI Proceedings.
3. Bechet P., **Miclaus S.**, Demeter S., Popa M., Bora M., *Continuous and Digital Modulated Radiofrequency Fields Propagation in Planar Biological Models*, Proceedings of the 2003 IEEE International Symposium on Electromagnetic Compatibility, Istanbul, Turkey, vol. 2, pp. 1241-1244, ISBN: 0-7803-7779-6 – journal indexed in the ISI Proceedings, Inspec and Google Scholar databases.
4. **Miclaus S.**, Bechet P., *Intercomparison Measurements of Environmental Radiofrequency Signal Levels with Respect to Human Exposure*, Abstract Book, 8th International Congress of the European Bioelectromagnetics Association (EBEA), <http://ebea.adera.fr/upload/abstract-new-19.03.2007/149/149-Miclaus-Bechet%20abstract.doc>, Bordeaux, France, 10-13 April 2007.

5. **Miclaus S.**, Bechet P, Demeter S, *Radiofrequency Power Deposition in the Spherical Model of a Biological Object Exposed to a Broadband Electromagnetic Pulse*, Proceedings of the 3rd Internat. Workshop "Biological Effects of Electromagnetic Fields", vol. II, pp. 1092-1097, ISBN 960-233-152-6, Kipriotis Village Resort, Kos, Greece, 4-8 Oct. 2004.