



# RGI NEWS

Volume 2. No 2., 02.10.1995

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## 10th Nordic-Baltic Conference on Biomedical Engineering & 1st International Conference on Bioelectromagnetism

The arrangements for the 10th Nordic-Baltic Conference on Biomedical Engineering are progressing well. The enclosed Final Call gives more detailed information on the conference arrangements.

As indicated in the Final Call, the Scientific Committee decided to organize the 1st International Conference on Bioelectromagnetism jointly with the Nordic-Baltic Conference. The reason for this was that it was anticipated that a large number of the papers would anyhow be in the field of bioelectromagnetism. Because the Ragnar Granit Institute is active in this field and wants to promote it, this is a good opportunity to start a series of new conferences.

Some 370 reply cards of the First Call were returned showing considerable interest towards the conference. The cards were returned from all over the world, the largest group coming, of course, from Finland (44). The other large groups were: Sweden (31), Lithuania (31), Germany (30), USA (30). From Japan there seems to be a large interest as well. This indicates that the conference has raised worldwide interest and forecasts that there will be a large participation.

As indicated in the Final Call, the conference has a WWW Home Page whose address is: <http://www.ee.tut.fi/~nbc96>. It will be regularly updated and it will give more detailed information on the scientific program.

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## International Society for Bioelectromagnetism

The electric and magnetic fields recorded from the body are generated by the same source: the electrochemical activation of the biological tissue. Similarly, it is the electric field induced by the magnetic impulse in magnetic stimulation which excites the electrically active tissue.

The electric and magnetic fields are strongly interrelated through the Maxwell equations. On the other hand, the electric and magnetic lead fields are mutually independent as stated by the Helmholtz theorem.

Therefore, to obtain the maximum information regarding the bioelectric source, it is important to discuss the biomagnetic phenomena in connection with the corresponding bioelectric phenomena.

Bioelectromagnetism is a discipline that examines the electric, electromagnetic, and magnetic phenomena which arise in biological tissues. These phenomena include:

- the behavior of excitable tissue (the sources), the electric currents and potentials in the volume conductor, the magnetic field at and beyond the body
- the response of excitable cells to electric and magnetic field stimulation
- the intrinsic electric and magnetic properties of the tissue.

To promote the discipline of bioelectromagnetism the Ragnar Granit Institute made an initiative for establishing the International Society for Bioelectromagnetism. The Society will facilitate the dissemination of new knowledge, encourage new research and sponsor International Congresses on Bioelectromagnetism.

Membership of the Society is open to all interested persons either technically, medically or scientifically qualified in bioelectromagnetism.

In the Founding Meeting of the Society on August 16th the following Office-Bearers were elected for the Society: President: Jaakko Malmivuo, Honorary President: Robert Plonsey, Secretary General: Hannu Eskola.

The Temporary Council until June 1996 will be: Jaakko Malmivuo, Robert Plonsey, Hannu Eskola, Yoshinori Uchigawa, Leonid Titomir, Shoogo Ueno, Maria Peters, Hiroshi Kanai, Marko Markov, Martin

Arthur, Tapani Lahtinen, Juha Nousiainen, Jari Hyttinen, Simon Walker, Rami Lehtinen, Jari Viik, Veikko Suihko, Noriyuki Takano. The full Council of 30 members will be elected in June, 1996.

The Executive Committee: President: Jaakko Malmivuo, Members: Robert Plonsey, Hannu Eskola, Simon Walker, Juha Nousiainen, Shoogo Ueno. Tapani Lahtinen was elected as alternate member of the Executive Committee.



## **J. Malmivuo and R. Plonsey: Bioelectromagnetism**

The book: "Bioelectromagnetism, Principles and Applications of Bioelectric and Biomagnetic Fields" authored by Jaakko Malmivuo and Robert Plonsey and published by Oxford University Press, New York, is now available. Further information on the book is enclosed.

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## **Jari Hyttinen Appointed as Researcher of the Academy of Finland**

Dr. Tech. Jari Hyttinen has been appointed as Researcher (nuorempi tutkija) of the Academy of Finland. He started his three-year term on the 1st of August 1995. He continues his research work at the Ragnar Granit Institute on modelling the cardiac electric field.

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## **Jaakko Malmivuo Appointments**

Professor Jaakko Malmivuo has been appointed:

- Member of the New York Academy of Sciences
  - Senior Member of the IEEE
  - Member of the Finnish Academies of Technology
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## **Information available on World Wide Web**

We have prepared a large source of information on the Ragnar Granit Institute and related activities on the World Wide Web. The addresses are as follows:

Ragnar Granit Institute: <http://www.ee.tut.fi/~rgi>

10th NBC & 1st ICBEM: <http://www.ee.tut.fi/~nbc96>

International Society for Bioelectromagnetism: <http://www.cc.tut.fi/~isbem>

The pages include links to several other pages in related topics like:

- All issues of the Ragnar Granit Institute News
- Bioelectromagnetism
- Ragnar Granit Foundation
- Professor Ragnar Granit

as well as pages for sending messages and comments to the Ragnar Granit Institute, Ragnar Granit Institute News and Professor Jaakko Malmivuo.

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