

The RAGNAR GRANIT

# INSTITUTE NEWS

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## *Season's Greetings*

*The personnel of the Ragnar Granit Institute thank all their friends for good co-operation during 2001 and wish everyone a Merry Christmas and a successful New Year 2002.*

**8<sup>th</sup> Ragnar Granit Symposium:  
Cardiovascular Hemodynamics,  
from Modeling to Clinical Applications  
September 13-14, 2001,  
LordHotel, Helsinki**

The Ragnar Granit Institute organized jointly with the CSC - Scientific Computing Ltd, Finland, on September 13-14, 2001, in the LordHotel, Helsinki the 8<sup>th</sup> Ragnar Granit Symposium. Its topic was: "*Cardiovascular Hemodynamics, from Modeling to Clinical Applications*". Professor **Jaakko Malmivuo** acted as President and Professor **Jari Hyttinen** as chairman of the Organizing Committee of the Symposium. The program was closely related to the DynAMo-project coordinated by the RGI.

The two days contained a total of 20 lectures and presentations given by top specialists from Finland and abroad. The international lecturers came from Germany, England and the USA.

The disaster on the 11<sup>th</sup> of September in New York, unfortunately, prevented additional lecturers from the USA from participating in the symposium.

[www.tut.fi/~malmivuo/edu/symposia](http://www.tut.fi/~malmivuo/edu/symposia)

[www.tut.fi/dynamo](http://www.tut.fi/dynamo)

[www.csc.fi](http://www.csc.fi)



Opening Lecture by Jaakko Malmivuo

**Special Issue of  
The International Journal of Bioelectro-  
magnetism, IJBEM**

International Journal of Bioelectromagnetism, IJBEM, is published by the International Society for Bioelectromagnetism, ISBEM. The publishing of this Journal is supported by the Ragnar Granit Institute and the Ragnar Granit Foundation. Professor **Jaakko Malmivuo** serves as Editor-in-Chief for the Journal. IJBEM is the first scientific journal which is primarily published on the Internet. This makes the publishing quick and easily available to everyone interested.

The lectures of the 8<sup>th</sup> Ragnar Granit Symposium were published as a special issue of the Journal. This issue of the IJBEM is extraordinary, because all the presentations given in the symposium were recorded on video and they are available in the connection with the Journal. This important task was performed by the CSC - Scientific Computing Ltd. This issue is the first scientific journal issue in the world, where the scientific articles can also be seen as videos on the Internet.

[www.tut.fi/ijbem/](http://www.tut.fi/ijbem/)



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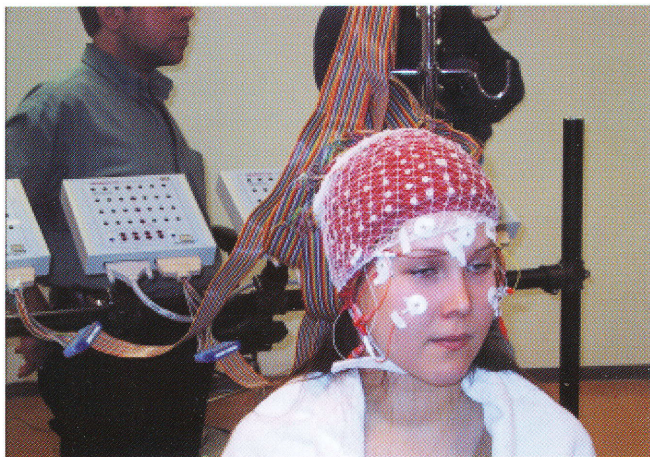


Juan R. Cebal  
George Mason University, USA

## 256-Channel EEG/ECG- Instrument Purchased for RGI as a Joint Investment

Ragnar Granit Institute, Institute of Signal Processing of Tampere University of Technology, Institute of Psychology of the University of Tampere and Department of Clinical Neurophysiology of Tampere University Hospital jointly purchased a 256-channel high-resolution instrument from Neuroscan Inc. The price for this installation was about 200.000 Euros. This instrument will be used in joint research projects of this consortium.

This instrument is the first of its kind in the Europe. There exist only four other such installations, two in the USA and two in Japan. The benefits of the EEG-instrumentation over the MEG ones are the following: Due to the basic laws of electromagnetism, the spatial resolution of the HiRes-EEG is better than that of the MEG. The EEG can be measured in a standard laboratory room without special shielding. The EEG measures both the tangential and radial components of the electric activity of the brain while the MEG measures only the two tangential components. The EEG-instrument costs less than 10% of an MEG-instrument with the same number of channels. The 256-channel instrument has already been used for preliminary scientific experiments. Notable is, that on 19. - 20. 11.2001 it was used for recording the 256-channel ECG. This was,



256-channel EEG measurement

according to our knowledge, the first recording of its kind in the world. The data from this recording will later be made available on the Internet by our partner in the DynAMo-project in Karlsruhe, Germany.

[www.tut.fi/~malmivuo/bem/eeeg](http://www.tut.fi/~malmivuo/bem/eeeg)

[www.tut.fi/dynamo](http://www.tut.fi/dynamo)

## 100 Years since the First Nobel Prizes

The 10<sup>th</sup> of December was the 100 years anniversary of Nobel Prizes. To honor this event, all living Nobel Prize winners were invited to Stockholm to the Nobel gala event. In addition, Swedish embassies around the world organized, on that day, events where the Nobel Prize winners of that country were honored.

The Swedish embassy in Helsinki organized a reception in honor of the Finnish Nobelists, **Frans Emil Sillanpää**, literature in 1939, **Artturi I. Virtanen**, chemistry 1945 and **Ragnar Granit**, physiology or medicine 1967.

In honor of these Nobelists, discourses were given by Professor **Heikki Reenpää** (Sillanpää), Chancellor **Risto Ihamuotila** (Virtanen) and Professor **Jaakko Malmivuo** (Granit). The President of the Republic of Finland, **Tarja Halonen** honored this occasion with her presence. Professor Ragnar Granit's son, Professor **Michael Granit** and his wife were also present.



256-channel ECG measurement