

Jaakko Malmivuo

CURRICULUM VITAE

www.bem.fi/malmivuo/index.htm

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▲◀▶ A Personal Information

Jaakko Antero Malmivuo

Born: 27.03.1944, Helsinki

Parents: Insurance manager Jussi Malmivuo and Paula Malmivuo

Wife: 1965, Medical laboratory technologist, textile artist Kirsti Malmivuo, born Könönen

▲◀▶ B Academic Degrees

1963 Matriculation: Töölön Yhteislyseo, Helsinki

1971 Diploma Engineer, Helsinki University of Technology

1973 Licentiate of Technology, Helsinki University of Technology

1976 Doctor of Technology, Helsinki University of Technology

▲◀▶ C Military Service

1963-64 Military service

1964 Second lieutenant

2006 National Defense Course (Maanpuolustuskurssi) No 177

2011 National Defense Continuation Course (Maanpuolustuksen jatkokurssi) No 89

▲◀▶ D Main Occupations

1969 Research assistant, Academy of Finland, Research Council of Medical Sciences

1970 System Planner, Helsinki University, Institute of Physiology

1970-72 Research assistant, Researcher, Helsinki University of Technology

1972-75 Clinical Engineer, Helsinki University, 1st Medical Clinic

1973-74 Project manager, Finnish National Fund for Research and Development (SITRA)

1974-75 ASLA Fulbright Grantee, Stanford University

1975-76 Researcher, Stanford University

1976 Research Assistant, Academy of Finland, Council of Technical Sciences

1976-85 Associate Professor of Bioelectromagnetism, Tampere University of Technology (TUT)

1979-80 Acting Professor of Electronics, TUT

1981-82 Senior Researcher, Academy of Finland, Council of Technical Sciences

- 1984-85 Acting Professor of Electronics, TUT
- 1986 Senior Researcher, Academy of Finland, Council of Technical Sciences
- 1986 Acting Professor of Bioelectromagnetism, TUT
- 1987-10 **Professor of Bioelectromagnetism, TUT** (retired 2010)
- 1988 Visiting Professor, Technische Universität Berlin (West)
- 1989 Visiting Professor, Dalhousie University, Halifax
- 1990-91 Senior Researcher, Academy of Finland, Council of Technical Sciences
- 1994 – Director, Ragnar Granit Institute, www.rgi.fi
- 1993 Visiting Professor, Sophia University, Tokyo
- 2006 Visiting Professor, University of Barcelona, Barcelona

▲◀▶ **E Secondary Occupations**

- 1970-72 Education Engineer, Continuing Education Center of the Finnish Engineering Societies
- 1978-88 Member of the Board, Department of Electrical Engineering, TUT
- 2001-07 - " -
- 1978 – Docent, University of Tampere, Faculty of Medicine
- 1985 – Docent, Helsinki University of Technology
- 1978-92 [Opera singer](#) (bass), Tampere Opera

▲◀▶ **F Educational Activities on Bioelectromagnetism**

- 1978-93 Lecturing annually at University of Tampere, Faculty of Medicine
- 1985 – Lecturing semiannually a course on Bioelectromagnetism, Helsinki University of Technology
- 1985 Director and one lecturer of Preconference Course, TUT
- 1994 One week (25 h) Intensive Course on Bioelectromagnetism, Tartu University
- 1996 Director and one lecturer of Preconference Course, TUT
- 1999 Director and one lecturer of Preconference Course, Tallinn University of Technology
- 2002 One week (25 h) intensive course on Bioelectromagnetism, Tallinn University of Technology
- 2004 Director and one lecturer of a two weeks [BEST](#) Course on Bioelectromagnetism, TUT
- 2005 One week (25 h) intensive course on Bioelectromagnetism, Tallinn University of Technology
- 2005 One week (25 h) intensive course on Bioelectromagnetism, Czech Technical University
- 2006 Director and lecturer of two Preconference Courses on Bioelectromagnetism, New York
- 2006 Two lecturing courses (25 h and 15 h) on Bioelectromagnetism, University of Barcelona
- 2006 The lecturing course Bioelectromagnetism [on the Internet, EVICAB](#)
- 2007 Two days (15 h) intensive course on Bioelectromagnetism, Tallinn University of Technology
- 2010 Two days (14 h) intensive course on Bioelectromagnetism, University of Florida

▲◀▶ **G Memberships and Positions of Trust in Scientific Societies**

- 1965 – Finnish Society for Medical Physics and Medical Engineering, Founding Member www.lfty.fi
 - 1984-90 Member of Board
 - 1987-90 President
 - 2008 – Honorary Member
- 1970 – Institute of Electrical and Electronics Engineers Inc. (IEEE), Member
 - 1995 – Senior Member
 - 2007 – Fellow, www.ieee.org/web/membership/fellows/
"for contributions to theoretical and experimental aspects of bioelectromagnetic phenomena"
- 1992 – IEEE Engineering in Medicine and Biology Society EMBS, Member
 - 1998-01 At-Large Representative of the Administrative Committee
 - 1994-00 Regional Conferences Committee, Member

1999-00 Regional Conferences Committee, Chairman

2000-02 Publication Committee, Member

1973 – Finnish Cardiological Society, Member

1973 – Finnish Society of Electronic Engineers, Member
1979 Chairman of Tampere Section

1994 – International Society for Electrocardiology, Member, www.electrocardiology.org
1997-2009 Member of the Council

1975 – Finnish Society for Clinical Physiology, Member

1978 – Finnish Brain Research Society, Founding Member

1995 – The New York Academy of Sciences, Member

1995 – The Finnish Academy of Technology, Member

1995 – International Society for Bioelectromagnetism, Founding Member, www.isbem.org
1995-99 President
1999 – Member of the Council

2003 – International Academy of Medical and Biological Engineering, Fellow



H Conference Committees

1982 The Fourth National Meeting of Medical Physics and Biomedical Engineering, (Tampere), President

1985 XIV International Conference on Medical and Biological Engineering &
VII International Conference on Medical Physics (Espoo), Member of the Scientific Committee

1993 The Cardiac Electric Field (Bratislava), Satellite Symposium to the
20th International Congress of Electrocardiology, Member of the Program Committee

1994 IEEE, EMBS Regional Meeting Advisory Committee

1995 17th Annual International Conference, IEEE EMBS, (Montreal), International Committee

1996 10th Nordic-Baltic Conference on Biomedical Engineering &
1st International Conference on Bioelectromagnetism, (Tampere), NBC1996
President, Chairman of the Program Committee

1996 NORSIG 96, IEEE Nordic Signal Processing Symposium (Espoo), Technical Committee

1996 18th Annual International Conference, IEEE EMBS, (Amsterdam), International Committee

1998 2nd International Conference on Bioelectromagnetism, (Melbourne)
Co-chairman of the Scientific Committee, Member of the International Advisory Committee

1999 11th Nordic-Baltic Conference on Biomedical Engineering, (Tallinn)
Member of the International Advisory Committee www.cb.ttu.ee/nbc99/

2000 10th European Signal Processing Conference, (Tampere), Member of the Program Committee

2003 30th International Conference on Electrocardiology, Helsinki, President, ICE2003

2005 3rd European Med. and Biol. Eng. Conf. EMBEC'05, (Prague), International Scientific Committee

2008 14th Nordic-Baltic Conf. on Biomed. Eng. and Med. Phys., Riga, International Scientific Committee

2009 World Congress on Med. Phys. and Biomed. Eng., München, Advisory Committee

2011 15th International Conference - Biomedical Engineering, Kaunas, Lithuania



I Invited Talks in International Conferences

1992 8th International Conference on Electrical Bio-Impedance, Kuopio, Finland

1993 8th Annual Meeting of the Japanese Biomagnetism and Bioelectromagnetics Society, Tokyo

1994 ICRABME94, Hyderabad, India

1994 EU-Conference: Biomedical Engineering Network on the Baltic Rim, Lübeck

1994 Annual Conference of the American Society of Engineering Education, Edmonton

1994 XVII World Conference on Medical Physics and Biomedical Engineering, Rio de Janeiro

1996 10th Nordic-Baltic Conference on Biomedical Engineering &
1st International Conference on Bioelectromagnetism, Tampere

1998 2nd International Conference on Bioelectromagnetism, Melbourne

- 1999 11th Nordic-Baltic Conference on Biomedical Engineering, Tallinn
- 2001 23rd IEEE EMBS, Istanbul, Turkey
- 2002 Biomag 2002, Jena, Germany
- 2004 Distinguished Lecturer, 26th IEEE EMBS, San Francisco, California
- 2004 Sci. Conf. 10th Anniversary of the Biomed. Eng. Centre, Tallinn Technical University, Estonia
- 2004 International Workshop for Bioelectromagnetism, University of Aizu, Aizu-Wakamatsu, Japan
- 2005 3rd European Med. and Biol. Eng. Conf. EMBEC'05, Prague
- 2008 14th Nordic-Baltic Conference on Biomedical Engineering and Medical Physics, Riga
- 2010 14th International Conference on Electrical Bioimpedance, Florida
- 2011 15th International Conference - Biomedical Engineering, Kaunas, Lithuania

J Other Scientific Positions of Trust

- 1980-85 Grant Committee, TUT
- 1989-93 City of Tampere Scientific foundation, member of board
- 1986-94 Finnish Cultural Foundation, Pirkanmaa Fund, member of board
- 1988 – Patron's Association of the Finnish Cultural Foundation, Member
- 1982-90 Scientific Committee, Tampere Dept. of the Defensive Forces (MATINE), Member of Board
- 1988-89 Committee of Biomedical Engineering at Tampere, Member
- 1989-92 Foundation of Health Care Technology, Vice Chairman of Board
- 1994 – Ragnar Granit Foundation, Chairman of Board www.rgs.fi
- 1994 – Scientific Advisory Committee, Biomed. Eng. Centre, Tallinn Technical University, Estonia
- 1996 Member of the International Committee evaluating International Research Schools in Denmark
- 2006-07 International Master's Degree Programme in Biomedical Engineering, TUT, Chairman of the Board
- 2007-10 International Graduate School on Medical Physics and Biomedical Engineering, [iBioMEP](http://www.ibio MEP.org), Chairman of the Board
- 2007 – COST Action NeuroMath: Advanced Methods for the Estimation of Human Brain Activity and Connectivity, Vice Chairman
- 2008 – Centre for Integrated Electronic Systems and Biomedical Engineering CEBE, Tallinn University of Technology, Member of International Advisory Board

Supervisor of Doctoral Theses

- 1983 Hannu Eskola
- 1984 Jukka Lekkala
- 1991 Harri Sievänen
- 1991 Juha Nousiainen
- 1993 Timo Leskinen
- 1993 Sakari Oja (University of Tampere)
- 1994 Jari Hyttinen
- 1996 Kari Mäkelä
- 1997 Rami Lehtinen
- 1999 Pasi Kauppinen
- 2000 Jari Viik
- 2008 Outi Väisänen
- 2010 Asta Kybartaitė
- 2010 Katrina Wendel

Evaluator and/or examiner of the following doctoral theses

- 1982 Timo Varpula, Helsinki University of Technology

- 1985 Risto Ilmoniemi, Helsinki University of Technology
- 2001 Tero Aittokoski, University of Turku
- 2002 Jaanus Lass, Tallinn University of Technology
- 2005 Romulus Lontis, Aalborg University
- 2009 Prabhu Britto, Anna University, Chennai, India

Expert in the nomination of the following academic positions

- 1990 Professor of Technical Physics, Helsinki University of Technology
- 1991 Professor in Faculty of Medicine, Dept. of Emergency Medicine, United Arab Emirates Univ.
- 1992 Professor of Medical Engineering and Medical Physics, Turku University
- 1992 Docent of Physics, Joensuu University
- 1994 Docent of Computational Physics, Helsinki University of Technology
- 1996 Docent of Superconducting Electronics, Helsinki University of Technology
- 1999 Professor of Medical Physic, University of Kuopio
- 1999 Professor of Biomedical Engineering, North Carolina State University
- 1999 Docent of Biomedical Engineering, Oulu University
- 1999 Professor, University of California, Irvine
- 2003 IEEE Fellow
- 2003 Professor of Biomedical Engineering, Washington University, St. Louis
- 2003 Professor of Computer Science, University of Oulu
- 2006 Professor of Biomedical Engineering, Duke University, Durham, North Carolina
- 2009 Professor of Biomedical Engineering, University of Oulu

Evaluator in international research projects

- 1979 National Science Foundation (USA)
- 1994 European Union, Biomed 1
- 1996 European Union, Biomed 2
- 2000 European Union, Quality of Life

Member in the editorial boards of scientific journals

- 1995-00 Automedica, Member of the Editorial Board
- 1996 – IEEE Biomedical Engineering Book Series, Member of the Editorial Board
- 1996-97 IEEE Transactions on Biomedical Engineering, Associate Editor
- 1999-06 International Journal of Bioelectromagnetism, Editor in Chief, www.ijbem.org

▲◀▶ K Positions of Trust

- 1980-82 Chairman of the Committee of the First Solemn Confessment of the Academic Degrees, TUT
- 1982 Master of Ceremonies in the First Solemn Confessment of the Academic Degrees, TUT
- 1978 – Finnish Conservative Club of Tampere (Tampereen Suomalainen Klubi), Member
 - 1984-89 Member of the Board
 - 1989-91 Vice President
 - 1992-96 President
- 1985-88 Tampere Philharmonic Orchestra, Member of Board
- 1985-90 Tampere Opera Council, Member
- 1987-90 Pyynikki Evangelic-Lutheran Parish, Member of the Parish Council, Tampere
- 1989-92 City of Tampere, Council of Cultural Affairs, Member
- 2001-02 Rotary Club of Helsinki, Vice President
- 2007-08 Rotary Club of Helsinki, President



L Medals of Merit

- 1982 Tampere University of Technology, Medal of Honor
- 1996 Finnish Conservative Club of Tampere, "*The Ear*"
- 2003 International Society for Bioelectromagnetism, Plaque



M Publications, Books

- 1976 On the Detection of the Magnetic Heart Vector - An Application of the Reciprocity Theorem, (Thesis)
- 1985 Biomedical Engineering (in Finnish)
- 1986 Bioelectronics (in Finnish)
- 1995 J. Malmivuo and R. Plonsey: Bioelectromagnetism, Oxford University Press, New York
- 2002 ... the aforementioned on the Internet: www.bem.fi/book/index.htm

20 Plenary talks in international scientific conferences

About 20 educational books

4 patents

*The total number of **publications** is over 600.*

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