



Conference Announcement – ICBEM 2018

11th International Conference on Bioelectromagnetism, 23-25 May 2018, Aachen, Germany

<http://www.isbem.org/conf/2018/11th.htm>

Philips Chair for Medical Information Technology (MedIT), Helmholtz-Institute for Biomedical Engineering,
RWTH Aachen University

Prof. Dr.-Ing. Dr. med. Steffen Leonhardt

Introduction

The 11th International Conference on Bioelectromagnetism (ICBEM) will be held in Aachen, Germany, on 23-25 May 2018 under the auspices of the International Society for Bioelectromagnetism (ISBEM). The proceedings of the conference will be published as a special issue of the International Journal of Bioelectromagnetism (IJBEM). Since its beginnings in Tampere, Finland in 1996, the ICBEM conference took place in Melbourne (1998), Bled (2000), Montreal (2002), Minneapolis (2005), Aizu (2007), Rome (2009), Banff (2011), Geneva (2013) and Tallinn (2015). In 2018, the conference will be hosted by the Philips Chair for Medical Information Technology (MedIT) at RWTH Aachen University. Following the fundamental idea of the ISBEM, the ICBEM 2018 provides a platform for researchers all over the world to share their experience regarding their work in the broad field of bioelectromagnetism, which includes:



- 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.

About Aachen

Aachen, traditionally known as Aix-la-Chapelle, is a border-town city in North Rhine-Westphalia in the triangle between Belgium, the Netherlands and Germany. The westernmost city in Germany once was known as the roman spa resort *Aquae Granni*. During the middle ages, Aachen was the residence for Charles the Great and later on coronation place for the German kings and thus, has a large and interesting history.

Nowadays, Aachen states as a center of research and technology and hosts one of the leading universities of





technology in Germany. Therefore, Aachen is a great choice for hosting the 11th International Conference on Bioelectromagnetism and we are very happy to invite you, to be part of this exciting event.

Topics

The following topics related to the field of bioelectromagnetism will be addressed at ICBEM 2018:

- Bioelectric and biomagnetic phenomena
- Mathematical and computer models
 - Ion channels, tissues and whole-heart
 - High-performance computing and computer simulations
- Theory and algorithms in the forward problem
- The inverse problem and source imaging
- Visualization and virtual reality
- Mapping techniques
- Electrocardiography
- Magnetocardiography
- Electroencephalography
- Magnetoencephalography
- Electromyography
- Bioelectric and biomagnetic signal processing
- Signal and image processing in CT and MRI
- Bioelectromagnetic measurement and instrumentation
- Brain-computer interfaces (BCI)
- Information technology for bioelectromagnetism

Call for papers

The “Call for Papers” including author guidelines for preparing the contributions will be announced on the ICBEM 2018 website in due time. The contributions to the ICBEM 2018 can comprise up to six (6) pages in length.

Important dates

The important dates including deadlines for paper contribution will be announced on the ICBEM 2018 website in due time.

International Organising Committee

Chair: Prof. Dr.-Ing. Dr. med. Steffen Leonhardt, Philips Chair for Medical Information Technology (MedIT), RWTH Aachen University, Germany
Contact: icbem2018@hia.rwth-aachen.de

Co-Chair: Prof. Jaakko Malmivuo, PhD, Department Electrical Engineering and Automation, Aalto University School of Electrical Engineering, Finland

International Scientific Committee

The Scientific committee will be formed by members of the ISBEM society and experts in the field of bioelectromagnetism.