Biosignal 2010: International Biosignal Processing Conference

Dear colleagues and friends,

biosignal analysis is a basic and exciting discipline in biomedical engineering. It contains the analysis of signals directly or indirectly generated by an organism in order to extract relevant information about the conformation, state and changes in states.

The theme of the conference "Biosignal 2010" from July 14th–16th 2010 in Berlin, Germany will be "Advanced technologies in intensive care and sleep medicine".

It will explore how biomedical engineering can contribute to solutions of monitoring problems in intensive care and in sleep medicine.

The main objectives of Biosignal 2010 congress are to provide the forum for discussion of research results and new scientific knowledge, promote personal contact and synergism, advance interaction between academia and industry and facilitate exchange of information on new processes and equipment.

On behalf of the scientific committee, we invite you to be part of the exciting process of realizing a successful congress. Mark your calendars and plan early to submit your contributions.

We will be looking forward to welcoming the experts in biomedical engineering, in intensive care, in sleep medicine and in all other related fields of the world in Berlin in 2010.

The "Biosignal 2010" conference chairs
Jürgen Kurths (Humboldt-Universität zu Berlin)
Hagen Malberg (Karlsruhe Institute of Technology)
Thomas Penzel (Charité Berlin)
Niels Wessel (Humboldt-Universität zu Berlin)

LOCATION

Humboldt-Universität zu Berlin
Fritz-Reuter-Saal, Hegelplatz 2
10117 Berlin-Mitte

Public Transportation

S-Bahn:	S+U Friedrichstraße Bhf: S1, S2, S25, S5, S7, S75, S9
U-Bahn:	S+U Friedrichstraße Bhf: U6
Bus:	Staatsoper: TXL
Lustgarten:	100, 200
Tram:	Am Kupfergraben: 12 Georgenstraße/Am Kupfergraben: 12 Universitätsstraße: 12

Contact

Dr. Maik Riedl
Cardiovascular Physics, Department of Physics
Humboldt-Universität zu Berlin
Robert-Koch-Platz 4, 10099 Berlin, Germany

Phone: +49 30 2093-99186
E-mail: maik.riedl@physik.hu-berlin.de

http://biosig2010.physik.hu-berlin.de/

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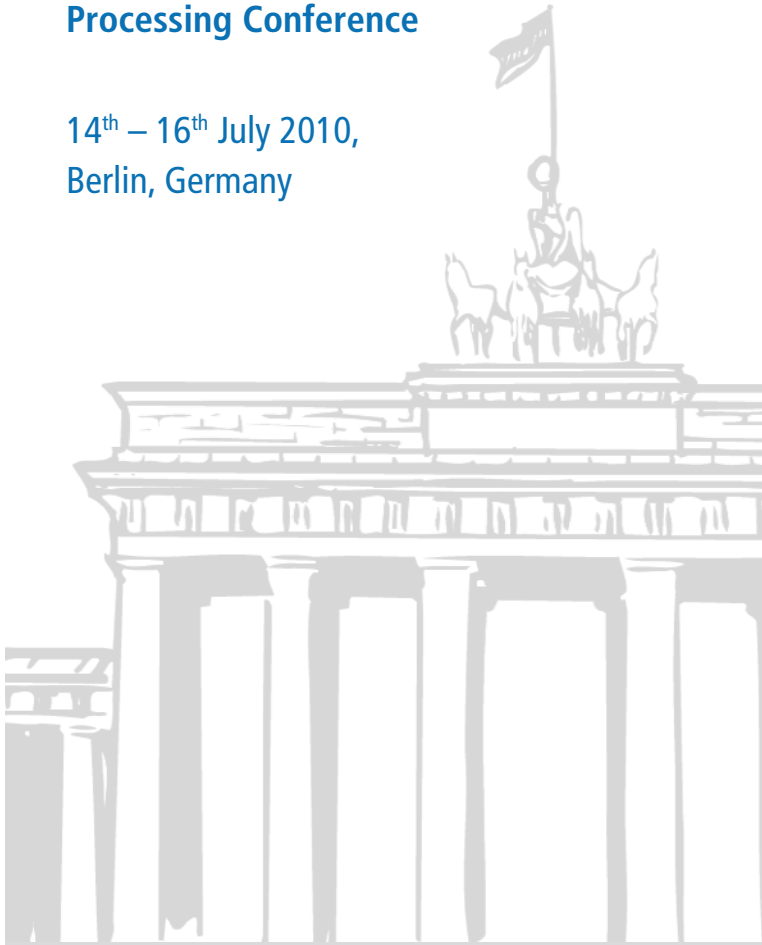
BIO SIGNAL 2010

Advanced Technologies in
Intensive Care and Sleep Medicine

International Biosignal Processing Conference

14th – 16th July 2010,
Berlin, Germany



On occasion of the 2010 **Charité Tricentennial** and the **Humboldt-Universität zu Berlin Bicentennial**

AIM

The aim of the International Conference "Biosignal 2010: Advanced technologies in Intensive Care and Sleep Medicine" is to bring together outstanding researchers and practitioners from the interdisciplinary area of biosignal analysis in intensive care and sleep medicine.

Experts from multiple areas of experience, including medicine, biology, engineering and physics, are invited to come to Berlin, interested in studying and using models and techniques inspired from or applied to biological systems.

The objective of the conference "Biosignal 2010" is focused on innovations in intensive care and sleep medicine.

CALENDAR

Main event:	July 14 –16, 2010
Deadline abstract submission:	March 15, 2010
Notification of acceptance:	April 30, 2010
Full manuscripts:	May 31, 2010
Deadline payment:	June 15, 2010

Later only 'Cash on-site' possible

ACCOMODATION

We reserved a contingent in the 4-star-hotel
Adina Apartment Hotel Berlin Hauptbahnhof
118 EUR per night incl. breakfast
(accompanying person only pays breakfast).

Please contact the hotels personally and refer to the Biosignal-meeting to get the reduced rates.

TOPICS

Physiological phenomenon for intensive care and/or sleep monitoring
Physiological phenomenon, being now and potentially in future monitored for monitoring, instationary alterations in physiological processes, external and internal influences, role of diseases

Detection, measurement and monitoring of physiological signals
On-line interactive signal acquisition and processing, on-line patient monitoring, intelligent monitoring, ambulatory systems, wearable sensors and systems and other related topics

Biosignal processing, pattern analysis, data fusion and interpretation
Linear, nonlinear and nonstationary analysis, adaptive data processing, model based signal analysis, chaotic and fractal analysis, time-frequency and time scale analysis, independent component analysis, cluster analysis, genetic algorithms, neural net-Fuzzy analysis, data mining and prediction, integration of signals, applications to ECG, Heart Rate Variability, EEG, MEG, EMG, blood pressure, respiration signals analysis, evoked potentials, multimodality approaches in intensive care and/or sleep analysis and other related topics.

Mathematical modeling of experimental and clinical data
Linear and nonlinear phenomena, complex systems, neural modeling and neural dynamics, modeling and control of cardiovascular and pulmonary systems, modeling of brain functions, perception and learning or other related topics.

Medical decision support methods, alarm giving, sleep stage estimation
Parameter estimation, decision making, rule based/expert systems, automatic diagnosis, data reasoning, methods for false alarm reduction and other related topics.

Medical informatics
Biosignal interpretation in virtual reality applications, in telemedicine and internet-based solutions for transmission, exchange and analysis of biomedical data and other related topics

SCIENTIFIC COMMITTEE

Organising Committee
Jürgen Kurths, Thomas Penzel, Hagen Malberg, Niels Wessel

Local Organising Committee
Andrej Gapelyuk, Martin Glos, Norbert Marwan, Maik Riedl, Christoph Schöbel

Program Committee
Gert Baumann, Georg Bretthauer, Sergio Cerutti, Ki Chon, Georg Dorffner, Joachim Wolfram Dudenhausen, Conor Heneghan, Ahasan Khandoker, Dagmar Krefting, Martin Mendez, Claudia Spiess, Herbert Witte

Society Representatives
Olaf Dössel, Hartmut Gehring, Hartmut Dickhaus (German Association of Biomedical Engineering, DGBMT); Michael Imhoff, Olaf Such (DGBMT, Working Group Patient Monitoring); Andreas Voss, Gudrun Stockmanns (DGBMT, Working group Biosignals); Lutz Trahms, Peter van Leeuwen (DGBMT, Working group Magnetic Methods in Medicine); Werner Wolf (IEEE); Ingo Fietze (German Sleep Society, DGSM); Christian Wrede (European Society of Intensive Care Medicine, ESICM); Tobias Welte (German Society for internal intensive care and emergency medicine, DGIIM)

BIOSIGNAL 2010