PRELIMINARY PROGRAM

SATURDAY, 26 APRIL 2014

1600-1830 Pre-conference Tutorial

The Inverse Solution, for Cardiologists and Engineers

Organizers: Dewar Finlay, University of Ulster, Belfast NORTHERN IRELAND
Paul Kligfield, Weill Cornell Medical College, New York NY USA

Presented by:
Rob MacLeod, University of Utah, Salt Lake City, Utah, USA
Inverse solutions in electrocardiography: an old problem is getting new attention

Break

Peter van Dam, Radboud Medical Center Nijmegen, Arnhem THE NETHERLANDS
Inverse solutions as activation sequence: clinical applications for ventricular arrhythmias

1900-2000 Opening reception

SUNDAY, 27 APRIL 2014

0815-0830 Paul Kligfield, Weill Cornell Medical College, New York, NY USA
Welcome and Opening remarks

0830-1200 Session I: Papers from submitted abstracts
Chair: Dewar Finlay, University of Ulster, Belfast, UK
Co-chair: Paul Kligfield, Weill Cornell Medical College, New York, NY USA

0830-0835 Dewar Finlay, University of Ulster, Belfast, UK
Overview

0835-0850 David Pickham, Stanford Hospital and Clinics, Stanford, CA USA
Abnormal variants for athlete screening is dependent upon criteria
0850-0905 Discussion
Loriano Galeotti, US Food and Drug Administration, Silver Spring, MD USA
Simulating drug-induced changes on the human ECG

0905-0920 Discussion
Tina Mammone, University of California, San Francisco, CA USA
Effect of daily skin preparation and application of high-quality ECG electrodes on physiologic monitor alarm rates in a neuroscience intensive care unit

0950-1005 Discussion
Rebeca Salas-Boni, University of California, San Francisco, CA USA
False VTACH alarm reduction: Using features extracted from wavelets

1005-1030 Break

1030-1045 Discussion
Chengzong Han, Philips Healthcare, Andover, MA USA
Automatic detection of ECG electrode misconnection using morphology or redundancy

1045-1100 Discussion
Peter van Dam, University of Nijmegen, Nijmegen THE NETHERLANDS
Novel 3-D Kinect camera software to detect and correct lead misplacement using the Cardiac Isochrone Positioning System to localize PVCs

1100-1115 Poster Session 1
PRESENTERS:
Roger Abächerli, Schiller AG, Baar SWITZERLAND
Detection performance of an automatic lead reversal detection module
Salah Al-Zaiti, University of Pittsburgh, Pittsburgh PA USA
Temporal complexity of depolarization indicates myocardial sympathetic denervation and predicts sudden cardiac arrest in patients with ischemic cardiomyopathy and poor left ventricular ejection fraction
Raymond Bond, University of Ulster, Belfast UK
Eye tracking technology and the 12-lead electrocardiogram: Where the experts look?
Jean-Philippe Couderc, University of Rochester Medical Center, Rochester NY USA
Detection of atrial fibrillation using contactless facial videoplethysmography
Quan Ding, UCSF, San Francisco CA USA
The predictive power of ECG metrics for bradyasystolic cardiac arrest
Reza Firoozabadi, Philips Healthcare, Andover MA USA
Monitoring respiration rate in sleep-disordered breathing patients using chest belts or ECG
Richard Gregg, Philips Healthcare, Andover MA USA
Detection of culprit coronary lesion location in pre-hospital 12-lead ECG
Hanna Lenhoff, Karolinska Institutet at Södersjukhuset, Stockholm SWEDEN
Reduction of corrected QT interval during the first week after cardioversion of atrial fibrillation to sinus rhythm during sotalol treatment
Alexander Shirdewan, Sana Klinikum Lichtenberg, Berlin GERMANY
Analysis of arrhythmia episodes stored in ICDs with implantable cardioverter-defibrillator lead with a floating atrial sensing dipole

John Wang, Philips Healthcare, Andover MA USA

Proposed new requirements for testing and reporting performance results of arrhythmia detection algorithms

1900-2145 SESSION II: Algorithm Developments in Resuscitation Technology
Chair: Rebecca Di Maio, HeartSine Technologies Ltd., Belfast NORTHERN IRELAND
Co-chair: Eric Helfenbein, Philips Healthcare, Andover MA USA
1900-1905 Rebecca Di Maio, HeartSine Technologies Ltd., Belfast NORTHERN IRELAND
Overview
1905-1920 Jennifer A. Adgey, Royal Victoria Hospital/Queen’s University, Belfast, UK
History of Defibrillation and Resuscitation Development”
1920-1935 Discussion
1935-1950 Rudolph W. Koster, The Academic Medical Center, Amsterdam, the Netherlands
Shortening time to defibrillation in out-of-hospital cardiac arrest: technology identifies the rescuer and AED
1950-2005 Discussion
2005-2015 Break
2015-2030 David McEneaney, Craigavon Area Hospital, Northern Ireland, UK
The end of cardiology?
2030-2045 Discussion
2045-2100 Douglas Weaver, Henry Ford Heart and Vascular Institute, MI USA
Public access defibrillation: Have we reached the mark?
2100-2115 Discussion
2115-2130 Benjamin S. Abella, University of Pennsylvania, Philadelphia, PA USA
Targeted temperature management following cardiac arrest
2130-2145 Discussion

2145-2300 Poster Session 1 – Continuing Discussions

MONDAY, 28 APRIL 2014

0830-1005 Session III: Race and the ECG
Chair: Larisa Tereshchenko, Oregon Health & Science University, Portland OR USA
Co-chair: Elsayed Z. Soliman, Wake Forest University School of Medicine, Winston Salem NC USA
0830-0835 Larisa Tereshchenko, Oregon Health & Science University, Portland OR USA
Overview
0835-0850 Elsayed Z. Soliman, Wake Forest University School of Medicine, Winston Salem NC USA
The paradox of atrial fibrillation in African Americans
0850-0905 Discussion
0905-0925 Peter W. Macfarlane, University of Glasgow, UK

ECG differences due to race - which really matter?

0925-0940 Discussion

0940-0955 Larisa Tereshchenko, Oregon Health & Science University, Portland OR USA

Racial differences in sudden cardiac death: genetic or due to comorbidities?

0955-1005 Discussion

1005-1030 Break

1030-1205 Session IV: Respiration and the ECG

Chair: David Mortara, Mortara Instrument, Milwaukee WI USA
Co-chair: Xiao Hu, UCSF,

1030-1035 David Mortara, Mortara Instrument, Milwaukee WI USA

Overview

1035-1050 Eric Helfenbein, Philips Healthcare, Andover MA USA

Algorithms and methods for extracting respiration from the surface ECG

1050-1105 Discussion

1105-1120 Christoph Maier, Heidelberg University Hospital, Heidelberg, Germany

Extraction of respiratory myogram interference from the ECG and its application to characterize sleep-related breathing disorders

1120-1135 Discussion

1135-1150 Mark Haigney, F. Edward Hébert School of Medicine, Bethesda, MD USA

Assessment of respiratory effort in heart failure using novel Holter-based indices

1150-1205 Discussion

1700-1800 Poster Session 2

PRESENTERS:

Ljuba Bacharova, International Laser Center, Bratislava SLOVAK REPUBLIC

ECG imaging of altered electrical properties of myocardium in myocardial infarction

Yong Bai, University of California, Los Angeles CA USA

Predicting in-hospital code blue events using term frequency inverse document frequency based kernel

Debora Brala, Sana Klinikum Lichtenberg, Berlin GERMANY

Body surface potential mapping and magnetic field mapping in patients with arrhythmogenic right ventricular cardiomyopathy: different techniques – different results?

Simon Chien, Philips Healthcare, Andover MA USA

ST elevation voltage maximal in the inferior leads is closely related to acute MI for ECGs in the absence of abnormalities other than ST elevation

Dirk Feild, Philips Healthcare, Andover MA USA

Unleashing the full power of the Long Term ST Database

Elyar Ghafoori, California State University, Long Beach CA USA

A highly accurate automated method for atrial fibrillation detection

Thomas Hilbel, Fraunhofer Institute for Integrated Circuits, Erlangen GERMANY
Application study for a vital-sensor network applied to seamless monitoring of patients with acute cardiac risk constellation in in-patient and out-patient settings: KARDIKOM-Wireless
Shibaji Shome, Boston Scientific Corporation, St. Paul MN USA
Feasibility of shock channel EGM based QRS duration estimation
Xiaojuan Xia, University of Rochester Medical Center, Rochester NY USA
Automatic Selvester QRS scoring in patients with left bundle branch block

1900-1950

Kenichi Harumi Plenary Address

OLLE PAHLM, Lund University, Lund Sweden

From the orderly sequenced 12-lead ECG to electrocardiographic imaging - a 40-year odyssey

1950-2000

Break

2000-2205 Session V: Jos Willems Young Investigators Competition
Chair: Mary G. Carey, University of Rochester Medical Center, NY USA
Co-chair: Shen Luo, Mind Ray Medical International Ltd., Madison WI USA
2000-2005 Mary G. Carey, University of Rochester Medical Center, NY USA
Overview
2005-2020 Kedar Aras, University of Utah, Salt Lake City UT USA
Sensitivity of epicardial electrical markers to acute myocardial ischemia detection
2020-2035 Discussion
2035-2050 Michael Daly, Royal Victoria Hospital, Belfast NORTHERN IRELAND
Epicardial potentials derived from the body surface potential map using inverse electrocardiography and an individualised torso model improve the diagnosis of acute myocardial infarction: A prospective study
2050-2105 Discussion
2105-2120 Lars Johannesen, USFDA, Silver Spring MD USA
The ECG can differentiate ion channel blocking subtypes of relevance for the development of drug-induced torsade
2120-2135 Discussion
2135–2150 Julia Ramírez, University of Zaragoza, Zaragoza SPAIN
Prediction of sudden cardiac death by analysis of restitution dispersion
2150–2205 Discussion

2205-2300 Poster Session 2 – Continuing Discussions

TUESDAY, 29 APRIL 2014

0830-1205 Session VI: Sex and the ECG
Chair: Marek Malik, Imperial College London, London UK
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<td>Overview</td>
<td>Joel Xue</td>
<td>GE Healthcare Germantown WI USA</td>
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<td>0850</td>
<td>Sex and standard 12-lead ECG measurements</td>
<td>Kavin Krudys</td>
<td>USFDA, Silver Spring MD USA</td>
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<td>Marek Malik</td>
<td>Imperial College London, London UK</td>
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<td>Sex differences in cardiac autonomic regulation</td>
<td>Kavin Krudys</td>
<td>USFDA, Silver Spring MD USA</td>
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<td>1030</td>
<td>Sex and ECGs in cardiac transplant recipients</td>
<td>Tomáš Novotný</td>
<td>University Hospital Brno, CZECH REPUBLIC</td>
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<td>Sex and ICD prophylaxis</td>
<td>Markus Zabel</td>
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<td>Gender differences in post-infarction risk assessment</td>
<td>Georg Schmidt</td>
<td>Munich University of Technology, München GERMANY</td>
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<td>Session VII: ECG Patch Devices</td>
<td>Suave Lobodzinski</td>
<td>CSULB, Long Beach CA USA</td>
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<td>1705</td>
<td>Novel sensors for patch devices</td>
<td>Suave Lobodzinski</td>
<td>CSULB, Long Beach CA USA</td>
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<td>1750</td>
<td>Bridging the gap between disruptive patch technology and conservative medicine</td>
<td>Lars Grieten</td>
<td>Holst Centre/IMEC, Eindhoven, THE NETHERLANDS</td>
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<td>Patch ECG for long term monitoring applications</td>
<td>Judy Lenane</td>
<td>iRhythm Technologies, San Francisco CA USA</td>
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WEDNESDAY, 30 April 2014
0730-0900 Closing breakfast