



ISCE '14
One Ocean Resort, Atlantic Beach FL
Saturday, April 26 - Wednesday, April 30, 2014

Paul Kligfield, M.D.
Weill Cornell Medical College
Conference Chair

Dewar Finlay, Ph.D.
University of Ulster
Conference Co-chair

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

0905-0920 Lorian Galeotti, US Food and Drug Administration, Silver Spring, MD USA
Simulating drug-induced changes on the human ECG

0920-0935 Discussion

0935-0950 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

1005-1030 **Break**

1030-1045 Rebeca Salas-Boni, University of California, San Francisco, CA USA
False VTACH alarm reduction: Using features extracted from wavelets

1045-1100 Discussion

1100-1115 Chengzong Han, Philips Healthcare, Andover, MA USA
Automatic detection of ECG electrode misconnection using morphology or redundancy

1115-1130 Discussion

1130-1145 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

1145-1200 Discussion

1700-1800 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 videoplethymography

Quan Ding, UCSF, San Francisco CA USA

The predictive power of ECG metrics for bradysystolic 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

Co-chair: Rory Childers, University of Chicago, Chicago IL USA
0830-0835 Marek Malik, Imperial College London, London UK

Overview

0835-0850 Joel Xue, GE Healthcare Germantown WI USA

Sex and standard 12-lead ECG measurements

0850-0905 Discussion

0905-0920 Kavin Krudys, USFDA, Silver Spring MD USA

Sex and drug-induced ECG changes

0920-0935 Discussion

0935-0950 Marek Malik, Imperial College London, London UK

Sex differences in cardiac autonomic regulation

0950-1005 Discussion

1005-1030

BREAK

1030-1045 Tomáš Novotný, University Hospital Brno, CZECH REPUBLIC

Sex and ECGs in cardiac transplant recipients

1045-1100 Discussion

1100-1115 Markus Zabel, University of Göttingen, GERMANY

Sex and ICD prophylaxis

1115-1130 Discussion

1130-1145 Georg Schmidt, Munich University of Technology, München GERMANY

Gender differences in post-infarction risk assessment

1145-1200 Discussion

1700-1835 Session VII: ECG Patch Devices

Chair: Suave Lobodzinski, CSULB, Long Beach CA USA

Co-chair: Michael Laks, UCLA, Los Angeles CA USA

1700-1705 Suave Lobodzinski, CSULB, Long Beach CA USA

Overview

1705-1720 Suave Lobodzinski, CSULB, Long Beach CA USA

Novel sensors for patch devices

1720-1735 Discussion

1735-1750 Lars Grieten, Holst Centre/IMEC, Eindhoven, THE NETHERLANDS

Bridging the gap between disruptive patch technology and conservative medicine

1750-1805 Discussion

1805-1820 Judy Lenane, iRhythm Technologies, San Francisco CA USA

Patch ECG for long term monitoring applications

1820-1835 Discussion

1900 Banquet

Poster Awards

JWYI Awards

President's Remarks

Conference Chair's Remarks

WEDNESDAY, 30 April 2014
0730-0900 Closing breakfast