WEDNESDAY, 13 APRIL 2016

1530-1845 Pre-Conference Tutorial  
*Atrial Fibrillation: Clinical Challenges and Monitoring ECG Solutions*  
Chair: Jean-Philippe Couderc, University of Rochester Medical Center, Rochester, New York, USA  
Co-Chair: David Albert, AliveCor, Inc., San Francisco, California, USA  
1530-1545 Chair  
*Overview*  
1545-1630 Peter Ott, University of Arizona Health Sciences Center, Tucson, Arizona, USA  
*What to do with device recognized AF and population screening for AF*  
1630-1700 W. Brian Chiu, Mortara Instrument, Milwaukee, Wisconsin, USA  
*Standard multi-lead Holter technologies*  
1700-1715 Break  

1715-1800 Mark Day and Judy Lenane, iRhythm Technologies, Inc., San Francisco, California, USA  
*Zio patch and AF detection*  
1800-1845 David Albert, AliveCor, Inc., San Francisco, California, USA  
*Finger ECG and AF detection*  

1845-2000 Opening Reception

THURSDAY, 14 APRIL 2016

0815-0830 Welcome & Opening Remarks  
Marek Malik, Imperial College, London, United Kingdom  
0830-1035 SESSION I: Selected Abstracts  
Chair: Jean-Philippe Couderc, University of Rochester Medical Center, Rochester, New York, USA  
0830-0835 Chair  
*Overview*  
0835-0850 Roger Abaecherli, Research & Development, Schiller AG, Baar, Switzerland  
*Intersubject variability and intrasubject reproducibility of 12-lead ECG metrics: Implications for human authentication*  
0850-0905 Discussion  
0905-0920 Ljuba Bacharova, International Laser Center, Bratislava, Slovak Republic  
*QRS complex waveform indicators of impulse propagation slowing: a simulation study*  
0920-0935 Discussion
0935-0950  Daniel Guldenring, Ulster University, Belfast, United Kingdom
*Computing the spatial QRS-T angle using reduced electrocardiographic lead sets*

0950-1005  Discussion

1005-1020  John Wang, Philips Healthcare, Andover, Massachusetts, USA
*Validation of the vessel-specific leads (VSLs) for acute ischemia detection on a dataset with non-ischemic ST-segment deviation*

1020-1035  Discussion

1035-1055  Break

1055-1210  SESSION II: Pediatric ECGs
Chair: Konrad Brockmeier, Heart Center, University of Cologne, Cologne, Germany

1055-1110  Chair
1105-1125  Bettina Cuneo, University of Colorado School of Medicine, Denver, Colorado, USA
*The fetal ECG and the fetal MCG*

1125-1140  Discussion

1140-1155  Konrad Brockmeier, Heart Center, University of Cologne, Cologne, Germany
*The ECG of the neonate and infant*

1155-1210  Discussion

1210-1700  Lunch and Afternoon Discussions

1700-1800  POSTER SESSION 1

PRESENTERS:

Salah Al-Zaiti, University of Pittsburgh, Pittsburgh, Pennsylvania, USA
*Widened QRS-T angle on the presenting 12-lead ECG indicates non-ST elevation myocardial infarction in patients with chest pain*

Jorge Arroyo-Palacios, University of California San Francisco, San Francisco, California, USA
*A behavioral approach describing parameter adjustments in alarm fatigue mitigation*

Simon C. Chien, Philips Healthcare, Andover, Massachusetts and California Institute of Technology, Pasadena, California, USA
*The relationship between ST depression in standard 12-leads and the ST elevation in extended leads*

Jaume Coll-Font, Northeastern University, Boston, Massachusetts, USA
*Can we track respiratory movement of the heart from the ECG itself---and improve inverse solutions too?*

Jonathan Currie, Ulster University, Newtownabbey, Northern Ireland, United Kingdom
*Using eye-tracking technology to capture the visual attention of nurses during interpretation of patient monitoring scenarios from a computer simulated bedside monitor*

Reza Firoozabadi, Philips Healthcare, Andover, Massachusetts, USA
*Improving STEMI screening by utilizing a diagnostic ECG algorithm in the monitoring environment*

Eric Helfenbein, Philips Healthcare, Andover, Massachusetts, USA
*Extraction of CPR compression rate from continuous patient monitoring pediatric ECG waveforms*

Kathleen Hickey, Columbia University, New York, New York, USA
*QTc prolongation may be a late biomarker of orthotopic heart transplantation (OHT) rejection*

Jui-chien Hsieh, Yuan University, Taoyuan, Taiwan
*A Cardiologist-centered app designed for faster inter-hospital ECG tele-consultation*

Muammar Kabir, Oregon Health and Science University, Portland, Oregon, USA
*Very-low frequency heart rate variability is depressed during hemodialysis session*

Teri Kozik, St. Joseph’s Medical Center, Stockton, California, USA
*Repolarization abnormalities associated with consumption of energy drinks*
Christoph Maier, Heilbronn University, Heilbronn, Germany
The Carrera Study: prospective evaluation of a Holter-based screening approach for sleep disordered breathing

Michele Pelter, University of California San Francisco, San Francisco, California, USA
Recurrent myocardial ischemia & symptoms are precursors to unplanned transfer from telemetry to the coronary care unit in hospitalized patients with suspected acute coronary syndrome

Golriz Sedaghat, Oregon Health and Science University, Portland, Oregon, USA
Quantitative assessment of vectorcardiographic loop morphology

1900-2005  SESSION III: Current ICD Risk Stratification Studies
Chair: Markus Zabel, University Medical Center Göttingen, Göttingen, Germany

1900-1905  Chair
Overview

1905-1920  Alfred E. Buxton, Beth Israel Deaconess Medical Center, Boston, Massachusetts, USA
Current ICD risk stratification studies, North American perspective (MEUSE-D)

1920-1935  Discussion

1935-1950  Markus Zabel, University Medical Center Göttingen, Göttingen, Germany
Current ICD risk stratification studies, European perspective (EU-CERT-ICD)

1950-2005  Discussion

2005-2015  Break

2015-2220  SESSION IV: Update on Regulatory Positions
Chair: Norman Stockbridge, U.S. Food and Drug Administration, CDER, Silver Spring, Maryland, USA

2015-2020  Chair
Overview

2020-2035  Norman Stockbridge, U.S. Food & Drug Administration, CDER, Silver Spring, Maryland, USA
From E14 to CIPA

2035-2050  Discussion

2050-2105  David Strauss, U.S. Food and Drug Administration, CDER, Silver Spring, Maryland, USA
Update on FDA electrocardiology research for drugs and devices

2105-2120  Discussion

2120-2135  Linda Ricci, U.S. Food and Drug Administration, CDRH, Silver Spring, Maryland, USA
Digital health technology and ECG – a regulatory perspective

2135-2150  Discussion

2150-2205  Konstantinos Makrodimitris, U.S. Food and Drug Administration, CDRH, Silver Spring, Maryland, USA
Cybersecurity of cardiac medical devices: integrity, availability, confidentiality and interoperability of data

2205-2220  Discussion

2220-2300  POSTER SESSION 1 – Continuing Discussion

FRIDAY, 15 APRIL 2016

0830-1035  SESSION V: ECG and Hemodialysis
Chair: Larisa Tereshchenko, Oregon Health and Science University, Portland, Oregon, USA

0830-0835  Chair
Overview

0835-0850  Debasish Banerjee, St. George’s University Hospitals NHS Foundation Trust, London, United Kingdom
Epidemiology of cardiac and sudden cardiac death in hemodialysed patients
0850-0905 Discussion
0905-0920 Rulan Parekh, The Hospital for Sick Children and University Health Network, Toronto, Canada
ECG manifestation of electrolyte changes
0920-0935 Discussion
0935-0950 Demitrios Poulikakos, Salford Royal NHS Foundation Trust, Manchester, United Kingdom
Challenges of ECG monitoring and ECG interpretation in dialysis units
0950-1005 Discussion
1005-1020 Jonathan Waks, Harvard-Thorndike Arrhythmia Institute, Harvard Medical School, Boston, Massachusetts, USA
Role of ECG in risk stratification in hemodialysed patients
1020-1035 Discussion
1035-1100 Break
1100-1235 SESSION VI: ECG and Genetics
Chair: Jørgen Kanters, Laboratory of Experimental Cardiology, Department of Biomedical Sciences, University of Copenhagen, Copenhagen, Denmark
Chair
1100-1105 Overview
1105-1120 Tuomas Oskari Kilpeläinen, Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark
What is a genome wide association study and how is it performed
1120-1135 Discussion
1135-1205 Jørgen Kanters, Laboratory of Experimental Cardiology, Department of Biomedical Sciences, University of Copenhagen, Copenhagen, Denmark
Repolarization and genetics
1205-1220 Discussion
1220-1225 Morten S. Olesen, Laboratory for Molecular Cardiology, Department of Cardiology, The Heart Centre, University Hospital of Copenhagen, Rigshospitalet, Copenhagen, Denmark
Genetics and atrial fibrillation
1225-1245 ISCE Membership Meeting
1225-1700 Lunch and Afternoon Discussions
1700-1800 POSTER SESSION 2
PRESENTERS:
Roger Abächerli, Research & Development, Schiller AG, Baar Switzerland
A correction formula for the ST segment of the AC-coupled electrocardiogram
Raymond Bond, Ulster University, Newtownabbey, Northern Ireland, United Kingdom
Human factors analysis of a novel engineering solution to the problem of electrode misplacement during 12-lead electrocardiogram acquisition
E. Harvey Estes, Jr., Duke University Medical Center, Durham, North Carolina, USA
The ECG components of the Romhilt-Estes score a risk predictors: What have we learned?
Yama Fakhri, Copenhagen University Rigshospitalet, Copenhagen, Denmark
Automatic algorithm for the determination of the Anderson-Wilkins acuteness score in patients with ST elevation myocardial infarction
Dirk Feild, Philips Healthcare, Andover, Massachusetts, USA
Sources of variability in QT calculations
Richard Fidler, University of California San Francisco, San Francisco, California, USA
Signal quality differences between Mason-Likar and Lund electrode configurations

Richard Gregg, Philips Healthcare, Andover, Massachusetts, USA
Left ventricular hypertrophy detection for Mason-Likar ECG electrode placement

Patricia Harris, Dominican University of California, San Rafael, California, USA
Frequency of apnea alarms generated during electrocardiographic impedance monitoring in mechanically ventilated patients

Meisam Hosseini, Office of Clinical Pharmacology, Office of Translational Science, CDER, US FDA, Silver Spring, Maryland, USA
Automated T-wave delineator algorithm for J-Tpeak and Tpeak-Tend

Jonas Isaksen, University of Copenhagen, Denmark and Schiller AG, Baar, Switzerland
Investigating the effects of the 0.05 Hz first-order high-pass filter on the electrocardiogram

Tommy Kwak, Advocate Illinois Masonic Medical Center, Chicago, Illinois, USA
Simple reconstruction of spatial QRS-T angle using morphology analysis of Philips 12-Lead Algorithm

Saman Parvaneh, Islamic Azad University, Tehran, Iran and Philips Research North America, Cambridge, Massachusetts, USA
Analysis of ECG in phase space for the prediction of spontaneous atrial fibrillation termination

Yalda Shahriari, University of California, San Francisco, California, USA
Perceptual image processing based ECG quality assessment

Peter Lyngoe Soerenson, Aalborg University, Aalborg, Denmark
Vectorcardiographic quantification of early repolarization

Jess Tate, University of Utah, Salt Lake City, Utah, USA
A pipeline for generating physiological volumetric ECG signals

Bert Vandenberk, University of Leuven, Leuven, Belgium and University Hospitals Leuven, Leuven, Belgium
Which correction formula for the QT-interval should be implemented in a computer based hospital wide QT-monitoring system?

1900-2000
Kenichi Harumi Plenary Address

Georg Schmidt, Technische Universität München, Munich, Germany
Post-extrasystolic cardiovascular response as risk predictor

2000-2010
Break

2010-2215
SESSION VII: Jos Willems Young Investigators Competition
Chair: Mary G. Carey, University of Rochester Medical Center, Rochester, New York, USA
Co-Chair: Shen Luo
2010-2015
Chair
Overview

2015-2030
Yama Fakhri, Copenhagen University Rigshospitalet, Copenhagen, Denmark
The initial ECG predicts myocardial salvage after primary percutaneous coronary intervention in patients with ST-elevation myocardial infarction presenting with symptoms for 12-72 hours

2010-2045
Discussion

2045-2100
Alan Kennedy, Nanotechnology and Integrated BioEngineering Centre, University of Ulster, Northern Ireland, United Kingdom
Automated detection of Atrial Fibrillation using RR intervals and multivariate based classification

2100-2115
Discussion

2115-2130
Travis Moss, University of Virginia School of Medicine, Charlottesville, Virginia, USA
Heart Rate Dynamics of Atrial Fibrillation in the Intensive Care Unit

2130-2145
Discussion
Jose Vicente, US FDA, CDER, Silver Spring, Maryland, USA and BSICoS Group, Aragón Institute for Engineering Research (I3A), IIS Aragón, University of Zaragoza, Zaragoza, Spain

Detecting late sodium current block on the ECG: biomarkers beyond QTc

POSTER SESSION 2 – Continuing Discussion

SATURDAY, 16 APRIL 2016

0830-0935  SESSION VIII: Improving CRT Efficacy by ECG/EGM Analysis
Chair: Robert Stadler, Medtronic Cardiac Rhythm and Disease Management, Minneapolis, Minnesota, USA
0830-0835  Chair
0835-0850  Subham Ghosh, Medtronic Cardiac Rhythm and Disease Management, Minneapolis, Minnesota, USA
Body surface isochrones mapping to improve CRT response
0850-0905  Discussion
0905-0920  Robert Stadler, Medtronic Cardiac Rhythm and Disease Management, Minneapolis, Minnesota, USA
Monitoring and improving the consistency of CRT pacing
0920-0935  Discussion

0935-1040  SESSION IX: T-Wave Pattern Variability
Chair: Vladimir Shusterman, The University of Iowa, Iowa City, Iowa, USA
0935-0940  Chair
0940-0955  Jan Nemec, Heart and Vascular Institute, University of Pittsburgh, Pittsburgh, Pennsylvania, USA
Physiological mechanisms, prevalence and clinical value of T-wave variability in different populations
0955-1010  Discussion
1010-1025  Mathias Baumert, School of Electrical and Electronic Engineering, The University of Adelaide, Adelaide, Australia
Signal Processing, detection and characterization of T-wave variability in real-life data
1025-1040  Discussion

1040-1100  Break

1100-1235  SESSION X: ECGs and Imaging
Chair: Nico Bruining, Thoraxcenter, Department of Cardiology, Erasmus MC, Rotterdam, The Netherlands
1100-1105  Chair
1105-1120  Nico Bruining, Thoraxcenter, Department of Cardiology, Erasmus MC, Rotterdam, The Netherlands
The importance of electrocardiology imaging for interventional cardiology
1120-1135  Discussion
1135-1150  Peter van Dam, UCLA Cardiac Arrhythmia Center, David Geffen School of Medicine at UCLA, Los Angeles, California, USA
What could we offer the interventionalist: 3D visualization of the ECG
1150-1205  Discussion
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<tr>
<th>Time</th>
<th>Session</th>
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<td>1205-1220</td>
<td>Noninvasive pre-ablation electrocardiographic imaging of post-infarction scar tissue</td>
<td>Linwei Wang, College of Computing and Information Sciences, Rochester Institute of Technology, Rochester, New York, USA</td>
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<td>1220-1235</td>
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<td>1235-1700</td>
<td>Lunch and Afternoon Discussions</td>
<td>SESSION XI: Advances in Electrocardiographic Monitoring</td>
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<td>1700-1905</td>
<td>Chair Overview</td>
<td>Tomas Novotny, University Hospital Brno and Masaryk University, Brno, Czech Republic</td>
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<td>Przemyslaw Guzik, Poznan University of Medical Sciences, Poznan, Poland</td>
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<td>ECG by mobile technologies</td>
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<td>Suave Lobodzinski, California State University, Long Beach, California, USA</td>
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<td>Clinical value of wearable ECG-patch technology: Convenience vs diagnostic accuracy</td>
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<td>Jan Kanovsky, University Hospital Brno and Masaryk University, Brno, Czech Republic</td>
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| 1915     | Banquet                  | Poster Awards
JWYI Awards
President’s Remarks
Conference Chair’s Remarks |
|          | SUNDAY, 17 APRIL 2016    |                                                                         |
| 0730-0900 | Closing Breakfast        |                                                                         |