International Society for Computerized Electrocardiology
40th Annual Conference
Hayes Mansion, San Jose CA
Wednesday, April 15 - Sunday, April 19, 2015

Dewar Finlay, Ph.D.  Marek Malik, Ph.D, MD
University of Ulster  Imperial College London
Conference Chair  Conference Co-chair

CONFERENCE PROGRAM

WEDNESDAY, 15 APRIL 2015

1530-1835  Pre-conference Tutorial

Sudden Cardiac Death

Organizers:  Marek Malik, Imperial College, London ENGLAND
Dewar Finlay, University of Ulster, Belfast NORTHERN IRELAND

1530-1545 Marek Malik, Imperial College, London ENGLAND
Overview

1545-1635 Richard Verrier, Boston
Title: Pathophysiological mechanisms involved in sudden cardiac death

1635-1655 Break

1655-1745 Sumeet Chugh, Los Angeles
Title: Epidemiology of sudden cardiac death

1745-1835 Georg Schmidt, Munich
Title: Stratification of sudden cardiac death risk

1835-2000 Opening reception

THURSDAY, 16 APRIL 2015

0800-0815  Welcome & Opening Remarks
DEWAR FINLAY, UNIVERSITY OF ULSTER, BELFAST NORTHERN IRELAND

0815-1020  Session I: Papers from submitted abstracts
Chair: Marek Malik, Imperial College, London ENGLAND
Co-chair: Dewar Finlay, University Of Ulster, Belfast NORTHERN IRELAND

0815-0820  Chair
Overview

0820-0835  Salah Al-Zaiti, University of Pittsburgh, PA USA
Title The Clinical Utility of Ventricular Repolarization Dispersion for Real-Time Detection of Non-ST Elevation Myocardial Infarction in Emergency Departments

0835-0850  Discussion

0850-0905  Loriano Galeotti, U.S. Food and Drug Administration, Silver Springs, MD USA
Title Computer simulations to investigate the causes of T wave notching
0905-0920 Discussion
0920-0935 Larisa Tereschchenko, Oregon Health & Science University, OR USA
   Title: Velocity of the Heart Vector Movement through the QRS Predicts Sudden Cardiac Death
0935-0950 Discussion
0950-1005 ShuFen Wung, The University of Arizona, AZ USA
   Title: Revisit 18-Lead Electrocardiogram in Acute Myocardial Infarction
1005-1020 Discussion

1020-1050 Break

1050-1235 Session II: Contemporary approaches to AF analysis
   Chair: Gari. D. Clifford, Emory University, Atlanta, GA USA
   Co-chair: Julien Oster, University of Oxford, UK
1050-1055 Chair
1055-1110 Valentina Corino, Politecnico Di Milano, Italy
   Title: Atrioventricular Conduction in Patients with Atrial Fibrillation
1110-1125 Discussion
1125-1140 Randall Moorman, University of Virginia, VA USA
   Title: A large open database for AF analysis
1140-1155 Discussion
1155-1210 Julien Oster, University of Oxford, UK
   Title: AF detection in noisy ECG using RR intervals and a machine learning approach
1220-1235 Discussion

1700-1800 Poster Session 1

PRESENTERS:
- Roger Abächerli, Schillar AG, Switzerland
  Title: An automatic lead quality monitoring system for optimal recording of 12-lead resting ECG: Validation on a clinical dataset from emergency department
- Richard Gregg, Philips Healthcare, Andover, MA USA
  Title: Automatic Age Estimation of Pediatric Patients by Analyzing 12-lead ECG
- Chengzong Han, Philips Healthcare, Andover, MA USA
  Title: Robust Automated Detection of ECG Cable Interchange in a Noisy Environment
- Jørgen Kanters, University of Copenhagen, Denmark
  Title: The QT interval increases with decreasing plasma potassium in the Danish general Population
- Hanna Viertio-Oja, GE Healthcare Finland
  Title: False arrhythmia alarms in ICU patients: Evaluation of the causes and assessment of the performance of a new algorithm
- Keith Marill, University of Pittsburgh, PA USA
  Title: The Relative Strength of Association of Clinical Factors with QT Prolongation
- Adam M. Sullivan, ZOLL LifeVest, Pittsburgh, PA USA
  Title: ECG characteristics of acute myocardial infarction patients
- Eric Helfenbein, Philips Healthcare, Sunnyvale, CA USA
  Title: Response of an ECG Signal Quality Indicator to Increasing Levels of Noise
- Reza Firoozabadi, Philips Healthcare
  *Title: Features to Improve Diagnostic Accuracy of Exercise Stress Testing*
- Peter van Dam, University of Los Angeles, CA USA
  *Title: Comparison of a New Vector Approach to Cardiac Isochrone Positioning System to Localize PVCs from the 12 Lead ECG*
- Larisa Tereschenko, Oregon Health & Science University, OR USA
  *Title: Sympathetic nerve density in the left ventricle directly impacts heart rate variability and QT variability*
- Elyar Ghafoori, Oregon Health & Science University, OR USA
  *Title: Intracardiac Vectorcardiogram Reconstruction from Implantable Cardioverter-Defibrillator Intracardiac Electrograms*
- Dirk Feild, Philips Healthcare
  *Title: Unleashing the Full Power of the Long Term ST Database*
- John Criley, University of Los Angeles, CA USA
  *Title: Teaching ECG analysis A new approach*

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**1900-2125 SESSION III: Applying Electrocardiographic Inverse Solutions in the Clinic: Progress and Challenges**

  Chair: Rob MacLeod, University of Utah, USA
  Co-chair: Peter van Dam, Radboud Medical Center Nijmegen, Arnhem, THE NETHERLANDS

  **1900-1905 Chair Overview**

  **1905-1920 Milan B. Horacek, Dalhousie University, Canada**
  *Title: Localization of the origin of ventricular activation: deterministic vs. statistical models*

  **1920-1935 Discussion**

  **1935-1950 Noel G. Boyle, University of California Los Angeles, USA**
  *Title: Activation Mapping of PVCs and VT using Patient Specific Anatomy, 12 lead ECG and the vector*

  **1950-2005 Discussion**

  **2005-2025 Break**

  **2025-2040 Rémi Dubois, IHU LIRYC (Electrophysiology and Heart Modeling Institute) Pessac (Bordeaux), France**
  *Title: ECGI in clinical practice: Panoramic Mapping to guide AF ablation*

  **2040-2055 Discussion**

  **2055-2110 Rob MacLeod, University of Utah, USA**
  *Title: The time is right: ECG Inverse solutions in research and clinical practice*

  **2110-2125 Discussion**

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**2125-2300 Poster Session 1 – Continuing Discussions**
FRIDAY, 17 APRIL 2015

0830-1005 Session IV: Training and education in ECG acquisition and interpretation
   Chair: Raymond Bond, University of Ulster, Belfast, UK
   Co-chair: Tomás Novotný, University Hospital Brno, CZECH REPUBLIC
0830-0835 Chair
   Overview
0835-0850 Richard Fidler, University of California San Francisco, USA
   Title: A Simulation Approach to Human Factors Analysis of Bedside Monitoring Displays
0850-0905 Discussion
0905-0925 Tomás Novotný, University Hospital Brno, CZECH REPUBLIC
   Title: The role of automatic computerised diagnoses: Are cardiac fellows better at ECG interpretation when compared to internists?
0925-0940 Discussion
0940-0955 Aaron Peace, Altnagelvin Hospital, Derry, UK
   Title: Using Interactive Response Technology for Training Electrocardiographers and for Aggregating Diagnoses
0955-1005 Discussion
1005-1030 Break

1030-1205 Session V: Neuro-autonomic signatures on the surface ECG
   Chair: Vladimir Shusterman, University of Iowa, IA USA
   Co-chair: Rachel Lampert, Yale University, New Haven, CT USA
1030-1035 Chair
   Overview
1035-1050 Rachel Lampert, Yale University, New Haven, CT USA
   Title: ECG signatures of psychological stress in daily life
1050-1105 Discussion
1105-1120 Cees A. Swenne
   Title: Within-subject ECG differences at equal heart rates during exercise and recovery, in normals and in heart failure patients.
1120-1135 Discussion
1135-1150 Vladimir Shusterman, University of Iowa, IA USA
   Title: Nighttime patterns of respiration and repolarization in patients with implantable devices.
1150-1205 Discussion
1205- 1215 ISCE Membership Meeting

1430-1530 SPECIAL SESSION   Remembering Ron and Rory
   with reception immediately following
1700-1800 Poster Session 2

PRESENTERS:

- Richard Gregg, Philips Healthcare, Andover, MA USA
  Title: Automated detection of preexcitation in pediatric 12-lead ECG

- Jessica Zègre-Hemsey, University of North Carolina at Chapel Hill, NC USA
  Title: Electrocardiographic Signs of Ischemia in Patients with Acute Coronary Syndrome
  Symptoms Differ by Mode of Transport to the Emergency Department

- Oluwadare Ogunlade, Obafemi Awolowo University, Nigeria
  Title: Sensitivity of an electrocardiographic score for sex determination in young adults

- Erik Carter, University of California San Francisco, CA USA
  Title: Heart Transplant Recipients Frontal QRS-T Angle is Comparative to an
  Ambulatory Population: A Matched Case Control study

- Timothy Callahan, Biomedical Systems, Woodland Hills, CA USA
  Title: Non-Linear Dynamical Metrics Distinguish Between Baseline, 160 mg, and 320 mg
  Doses of Sotalol

- Richard Fidler, University of California San Francisco, CA USA
  Title: Impedance Measurement in Patient Electrodes Affecting Noise in Clinical
  Electrocardiography: The IMPEDANCE Study

- Michele Pelter, University of Nevada, NV USA
  Title: Frequency, Characteristics & Consequences of Ischemia using 12-lead ECG
  Holter in Non-STEMI & Unstable Angina Patients Comparing Invasive to Conservative
  Treatment

- Adelita Tinoco, University of California San Francisco, CA USA
  Title: ECG-Derived Abnormal Breathing Patterns in Healthy and Ill Populations

- Simon C. Chien, California Institute of Technology, CA USA
  Title: The Tradeoff of Sensitivity Loss to the Specificity Increase for LVH Voltage
  Criteria in Chinese Population

- Shu-Fen Wung, University of Arizona, AZ USA
  Title: Judicious monitoring aimed at minimizing alarm fatigue

- Kevin Day, University of Arizona, AZ USA
  Title: Estimation of 4th Intercostal Space Using Sternal Notch to Xiphoid Length for
  Accurate Electrocardiogram Lead Placement

- Di Xu, Philips Research North America, NY USA
  Title: Atrial Fibrillation and Patient Deterioration in the General Ward

- S. Suave Lobodzinski Logan Research, Long Beach, CA USA
  Title: Very Long Term ECG Cloud Computing - Opportunities and Challenges

- Jose Vicente, US FDA (no location listed)
  Title: Sex-Differences in Drug-Induced Changes in Ventricular Repolarization
1900-1950  Kenichi Harumi Plenary Address

DAVID W. MORTARA, PHD
Mortara Instrument, Milwaukee WI USA
Title Turning points in 40 years of electrocardiography

1950-2000  Break

2000-2205  Session VI: Jos Willems Young Investigators Competition
Chair: Mary G. Carey, University of Rochester Medical Center, Rochester, NY USA
Co-chair: Shen Luo, MindRay Biomedical, Mahwah NJ USA
2000-2005  Chair
Overview
2005-2020  Alan Kennedy, University Of Ulster, Belfast NORTHERN IRELAND
Title: Improved recording of atrial activity by modified bipolar leads derived from the
12-lead electrocardiogram
2020-2035  Discussion
2035-2050  Matthijs Cluitmans, Maastricht University, THE NETHERLANDS
Title: High-resolution validation of localization of electrocardiographic imaging shows a
centimeter-accuracy
2050-2105  Discussion
2105-2120  Naoki Misumida, Mount Sinai Beth Israel, New York USA
Title: Absence of ST Elevation in Lead V1 Predicts Worse Long-term Outcomes in
Patients with First Anterior ST Elevation Myocardial Infarction
2120-2135  Discussion
2135–2150  Muammar Kabir, Oregon Health and Science University, USA
Title: High Atrioventricular Phase Index on Near-Field Intracardiac Electrogram is
Associated With Risk of Ventricular Arrhythmia
2150–2205  Discussion

2205-2300  Poster Session 2 – Continuing Discussions

SATURDAY, 18 APRIL 2015

0830-1205  Session VII: Leads, vectors and dipoles
Chair: Cees A. Swenne, Leiden University Medical Center, Leiden, NL
Co-chair: Daniel Guldenring, University of Ulster, Belfast, UK
0830-0835  Chair
Overview
0835-0850  John J Wang, Philips Healthcare, Andover MA USA
Title Validation of improved vessel-specific leads (VSLs) for detecting acute myocardial
ischemia
0850-0905  Discussion
0905-0920  Jan Kors, Erasmus MC, Rotterdam, THE NETHERLANDS
Title Lead Transformtions
0920-0935  Discussion
0935-0950  Daniel Guldenring, University of Ulster, Belfast, UK
   Title The derivation of the spatial QRS-T angle and spatial ventricular gradient using the Mason-Likar 12-lead ECG
0950-1005  Discussion

1005-1030  BREAK

1030-1205  Session VIII: Inherited Arrhythmia and the ECG
   Chair: Frank Marcus, University of Arizona, AZ, USA
   Co-chair: Marti Tristani-Firouzi, University of Utah, USA
1030-0835  Chair
   Overview
1035-1050  Wojciech Zareba, University of Rochester, Rochester NY USA
   Title: QT morphology and dynamics in LQTS
1050-1105  Discussion
1105-1120  Marti Tristani-Firouzi, , University of Utah, USA
   Title: tbc
1120-1135  Discussion
1135-1150  Frank Marcus, University of Arizona, AZ, USA
   Title: ECG findings in Arrhythmogenic Right Ventricular Cardiomyopathy
1150-1205  Discussion

1650-1900  Session IX: New applications and innovations in ECG monitoring
   Chair:  Xiao Hu, University of California San Francisco, CA USA
   Co-chair:  David Pickham, Stanford Hospital and Clinics, Stanford, CA USA
1650-1655  Chair
   Overview
1655-1710  Barbara Drew, University of California San Francisco, CA USA
   Title: Insights into the Problem of Alarm Fatigue and Recommendations for Device Innovations
1710-1725  Discussion
1725-1740  Duc Do, University of California Los Angeles, CA USA
   Title: Can ECG monitoring identify three major types of in-hospital cardiac arrest?
1740-1755  Discussion

1755-1800  Break
1800-1815  Carolina Varon, KU Leuven, Belgium
   Title: Can ECG monitoring identify seizures?
1815-1830  Discussion
1830-1845  Randall Moorman, University of Virginia, USA
   Title: Predictive monitoring for subacute potentially catastrophic monitoring in real time
1845-1900  Discussion

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1915  Banquet
      Poster Awards; JWYI Awards
      President’s Remarks; Conference Chair’s Remarks

SUNDAY, 19 April 2015
0730-0900  Closing breakfast