

Poster Program Details

Tuesday, September 6, 2022

15:45 - 17:45 Coffee break and Poster Session

15:45 - 17:45 Session P7_1 - Cardiovascular Imaging

Session P7_1, ID 191 (Board No. 1)

Deep Learning Models for Automatic Segmentation of Left Ventricular Fibrosis on Late Gadolinium Enhancement Cardiac Magnetic Resonance Imaging

Florence van Lieshout, Roel Klein, Maarten Kolk, Kylian van Geijtenbeek, Romy Vos, Samuel Ruiperez-Campillo, Ruibin Feng, Brototo Deb, Prasanth Ganesan, Reinoud Knops, Ivana Isgum, Sanjiv Narayan, Erik Bekkers, Bob Vos, Fleur Tjong

Session P7_1, ID 242 (Board No. 2)

Early Myocardial Infarction Detection with One-Class Classification over Multi-view Echocardiography

Aysen Degerli, Fahad Sohrab, Serkan Kiranyaz, Moncef Gabbouj

Session P7_1, ID 348 (Board No. 3)

Shear Wave Imaging Framework for Quantification of Myocardial Tissue Properties

Martin Andersen, Johannes Struijk, Samuel Emil Schmidt

Session P7_1, ID 60 (Board No. 4)

Lirot.ai: A Novel Platform for Crowd-Sourcing Retinal Image Segmentations

Jonathan Fhima, Jan Van Eijgen, Moti Freiman, Ingeborg Stalmans, Joachim A. Behar

15:45 - 17:45 Session P7_2 - Cardiovascular Mechanics

Session P7_2, ID 3 (Board No. 5)

Description of the Volume-Clamp Method of Blood Pressure Measurements Using the Mathematical Model of the Lamé Problem

Marek Żyliński, Wiktor Niewiadomski, Gerard Cybulski, Anna Gąsiorowska

Session P7_2, ID 19 (Board No. 6)

Impact of Rigid Versus Dynamic Boundaries on Computational Fluid Dynamics Predictor of Left Atrial Appendage Thrombus Formation

Henrik Kjeldsberg, Kristian Valen-Sendstad, Joakim Sundnes

Session P7_2, ID 85 (Board No. 7)

Comparison Of Newtonian And Non-Newtonian Blood Flow In Ascending Aortic Aneurysm

Aleksandra Petuchova and Algirdas Maknickas

Session P7_2, ID 102 (Board No. 8)

In Silico Evaluation of New Approaches in Cardiac Resynchronization Therapy

Cristóbal Ruiz, Juan Gómez, Jesús Almendral, Eduardo Castellanos, Beatriz Trenor

Session P7_2, ID 182 (Board No. 9)

Age-specific Topology Minimization in a One-dimensional Model Describing Carotid Haemodynamics

Irene Suriani, Massimo Mischi, R. Arthur Bouwman, Kevin Lau

Session P7_2, ID 243 (Board No. 10)

The Influence of Left Atrial Wall Thickness and Curvature on Wall Strain in Patient-Specific Atrium Models

Tiffany Baptiste, Angela Lee, Daniel Ennis, Ulrike Haberland, Ronak Rajani, Aldo Rinaldi, Steven Niederer

Session P7_2, ID 264 (Board No. 11)

Prediction of deterioration in critically ill patients with heart failure based on vital signs monitoring

Yijing Li, Kang Yang, Wenyu Ye, Haoyu Jiang, Xianliang He, Lei Wang, Shengyu Zhang

Session P7_2, ID 301 (Board No. 12)

Feature Contributions to ECG-based Heart-Failure Detection: Deep Learning vs. Statistical Analysis

Agnese Sbröllini, Chiara Leoni, Marjolein de Jongh, Micaela Morettini, Laura Burattini, Cees A. Swenne

Session P7_2, ID 409 (Board No. 13)

Harnessing Dermal Blood Flow Thermoregulation for Mitigating Skin Heating Effects in Transcutaneous Energy Transfer Systems for Wirelessly Energizing Heart Pumps

Mohammad Karim, Antonio Bosnjak, James McLaughlin, Paul Crawford, David McEneaney, Omar Escalona

15:45 - 17:45 Session P7_3a - Ventricular Arrhythmias

Session P7_3a, ID 173 (Board No. 14)

Arrhythmia detection based on semantic segmentation for Multi-lead ECG

Hanshuang Xie, Huaiyu Zhu², Yun Pan

15:45 - 17:45 Session P7_3b - Atrial Arrhythmias: Electrocardiography

Session P7_3b, ID 11 (Board No. 15)

The P-wave Time-domain Significant Features to Evaluate Substrate Modification After Catheter Ablation of Paroxysmal Atrial Fibrillation

Aikaterini Vraka, Vicente Bertomeu-González, Leif Sornmo, Roberto Zangróniz, Raul Alcaraz, José J Rieta

Session P7_3b, ID 12 (Board No. 16)

Left Pulmonary Veins Isolation: The Cornerstone in Noninvasive Evaluation of Substrate Modification After Catheter Ablation of Paroxysmal Atrial Fibrillation

Aikaterini Vraka, José Moreno-Arribas, Juan M Gracia-Baena, Flavia Ravelli, Raul Alcaraz, José J Rieta

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Session P7_3b, ID 55 (Board No. 17)

A Machine Learning based approach for localization of Atrial Tachycardia origin

Céline Hajjar, Thomas Boudou, Jérôme Kalifa, Clément Bars, Julien Seitz

Session P7_3b, ID 68 (Board No. 18)

Exaggerated amplitude and peak location of Ta wave in tachycardia as an indicator for atrial disorders

Arya Bhardwaj, Bala Chakravarthy Neelapu, Kunal Pal, Sivaraman Jayaraman

Session P7_3b, ID 94 (Board No. 19)

Mechanisms of Initiation and Acute Termination by Non-invasive Identification of Atrial Fibrillation Drivers

Miguel Rodrigo, Albert Rogers, Prasanth Ganesan, Brototo Deb, Mahmood Alhusseini, Sanjiv Narayan

Session P7_3b, ID 106 (Board No. 20)

Exercise Test Predictors of Late Recurrence of Atrial Fibrillation After Catheter Ablation

Jakub Hejc, Richard Redina, Tomas Kulik, Martin Pesl, Zdenek Starek

Session P7_3b, ID 154 (Board No. 21)

Clustering of time-evolving frequency patterns in atrial fibrillation on the surface electrocardiogram

Adrian Luca, Patrizio Pascale, Etienne Pruvot, Jean-Marc Vesin

Session P7_3b, ID 184 (Board No. 22)

Detecting atrial fibrillation with a wearable device

Jonas Sandelin, Jukka-Pekka Sirkiä, Tero Koivisto

Session P7_3b, ID 220 (Board No. 23)

A Lightweight Unidimensional Deep Learning Model for Atrial Fibrillation Detection

Quenaz Bezerra Soares and Marco Gutierrez

Session P7_3b, ID 282 (Board No. 24)

Arrhythmia database with annotated intracardial atrial signals from pediatric patients undergoing catheter ablation

Richard Ředina, Jakub Hejc, David Pospisil, Marina Ronzhina, Petra Novotna, Zdenek Starek

Session P7_3b, ID 312 (Board No. 25)

AI-enabled ECG combined with dry electrode sensors for population-based screening of Atrial Fibrillation

Alan Kennedy, Peter Doggart, Dewar Finlay, Raymond Bond, Daniel Guldenring, James McLaughlin, Chris Crockford

Session P7_3b, ID 314 (Board No. 26)

Detection of Supraventricular Tachycardias in Single-Lead ECGs Recorded from a Handheld Device

Hesam Halvaei, Emma Svennberg, Leif Sörnmo, Martin Stridh

Session P7_3b, ID 320 (Board No. 27)

Analysis of P-wave Changes for Prediction of Atrial Fibrillation Episodes

Cristina Moreno, Alba Martin, Aleksei Savelev, Pyotr Platonov, Pablo Laguna, Juan Pablo Martínez

Session P7_3b, ID 418 (Board No. 28)

Is the Dominant Frequency Accurate Enough for Atrial Fibrillation Signals?

Aline Cabasson, Olivier Meste, Stef Zeemering, Ulrich Schotten, Pietro Bonizzi

15:45 - 17:45 Session P7_4a - ECG-Waveform Analysis

Session P7_4a, ID 34 (Board No. 29)

Efficiency of different heartbeat detection methods by using alternative noise reduction algorithms

Marcus Vollmer and Jader Giraldo Guzmán

Session P7_4a, ID 373 (Board No. 30)

Extraction algorithm for morphologically preserved non-invasive multi-channel fetal ECG

Giulia Baldazzi, Danilo Pani, Hau-Tieng Wu

Session P7_4a, ID 148 (Board No. 31)

Sport?Sicuro! A Graphical User Interface for Continuous Cardiovascular Monitoring while Playing Sport Based on Heart Rate and Heart-Rate Variability

Sofia Romagnoli, Agnese Sbröllini, Ilaria Marcantoni, Micaela Morettini, Laura Burattini

Session P7_4a, ID 422 (Board No. 32)

Sex Detection Based Self-Supervised Learning for Prediction of LVEF from the ECG

James Brundage, Brian Zenger, Jake Bergquist, Ann Lyons, Ryan Butcher, Bao Wang, Rashmee Shah, Rob MacLeod, Benjamin Steinberg, Tolga Tasdizen

Session P7_4a, ID 338 (Board No. 33)

Robustness of Residual Network in Predicting PR Interval Trained using Noisy Labels

Loc Cao, Hamid Ghanbari, Negar Farzaneh, Kevin Ward, Sardar Ansari

Session P7_4a, ID 121 (Board No. 34)

Decision Tree-based Model for Signal Quality Scanning in Wearable ECG

Caiyun Ma, Zhongyu Wang, Meicheng Yang, Jianqing Li, Chengyu Liu

Session P7_4a, ID 158 (Board No. 35)

An Extension of Quadratic variation regularization for simultaneous baselinewander and powerline interference removal from ECG

Arman Kheirati Roonizi and Roberto Sassi

Session P7_4a, ID 213 (Board No. 36)

Automated Rhythm Transcription for Arrhythmia Sequences

Gonzalo Romero and Elaine Chew

Session P7_4a, ID 239 (Board No. 37)

Adaptive approach for denoising ECG measurements using unconventional sensing technology.

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Henry Dore, Rodrigo Aviles-Espinosa, Elizabeth Rendon-Morales

Session P7_4a, ID 423 (Board No. 38)

ECG analysis to study social connections in older cardiac patients

Raquel Cervigón, María Cardo, Alejandra Chulián, Francisco Castells, Samuel Ruipérez-Campillo

Session P7_4a, ID 333 (Board No. 39)

Passive Conductance of ECG and Other Biopotentials

Teodor Buchner, Maryla Zajdel, Kazimierz Pęczalski, Paweł Nowak

Session P7_4a, ID 332 (Board No. 40)

Transfer Entropy for Linear QT Correction Under Stationary and Gaussian Assumptions of the QT/RR Probability Distribution

Massimo W Rivolta

Session P7_4a, ID 397 (Board No. 41)

Time-warping Analysis of the T-wave Peak-to-End Interval During Ischemia as Arrhythmia Risk Marker

Neurys Gómez Fonseca, Julia Ramírez, Pablo Laguna, Juan Pablo Martínez

Session P7_4a, ID 122 (Board No. 42)

An Optimized Automatic P Wave Delineation Method based on Phasor Transform

Jiayi Yan, Hanshuang Xie, Yun Pan

Session P7_4a, ID 384 (Board No. 43)

Detection of arterial hypertension through electrocardiograms

Larissa Vieira, Eduardo Mio, Derick Oliveira, Antonio Luiz Ribeiro, Wagner Meira Jr.

Session P7_4a, ID 377 (Board No.44)

Development and validation of a desktop user-friendly quantitative tool for analyzing cardiac restitution activation-repolarization dynamics from multimodal data

Enrique Almar Muñoz, Antonio Rodriguez, Oscar Arias, Manuel Zarzoso, Conrado J. Calvo

Session P7_4a, ID 63 (Board No. 45)

The Advantage of Layer Freezing for Fine-Tune Deep Learning Algorithms in ECG Quality Assessment

Alvaro Huerta Herraiz, Arturo Martínez-Rodrigo, José J Rieta, Raul Alcaraz

Session P7_4a, ID 255 (Board No. 46)

Edge-based Real-time Fetal Electrocardiography Monitoring in the Home Setting

Floranne Ellington, Berken Demirel, Daniel Jilani, Mohammad Al Faruque, Hung Cao

Session P7_4a, ID 39 (Board No. 47)

A new filtering method for smoothing intracardiac records preserving the steepness of A, V, H waves

Oto Janousek, Jakub Hejc, David Pospisil

Session P7_4a, ID 75 (Board No. 48)

Chest-Lead Generation with Single-Lead

Giwon Yoon, Hyo-Chang Seo, Kyungmin Choi, Hannah Kim, Segyeong Joo

Session P7_4a, ID 252 (Board No. 49)

Impact of Pre-Processing Decisions on Automated ECG Classification Accuracy

Adrian Cornely and Grace Mirsky

Session P7_4a, ID 308 (Board No. 50)

Depressed Patients Identification using Cardiovascular Signals

Mohammad Sami Zitouni and Ahsan Khandoker

Session P7_4a, ID 123 (Board No. 51)

A fractal-based approach for suppressing chest compression noise in ECG signal

Shengyu Zhang, Mimi Hu, Junbiao Hong, Haoyu Jiang, Xianliang He, Lei Wang

Session P7_4a, ID 185 (Board No. 52)

Identification of myocardial infarction by high frequency serial ECG measurement

Jonas Sandelin, Jukka-Pekka Sirkiä, Arman Anzanpour, Tero Koivisto

Session P7_4a, ID 179 (Board No. 53)

Adaptive Electrocardiogram Enhancement in Strong Noise Environment

Qian Li, Xingyao Wang, Chenxi Yang, Jianqing Li, Chengyu Liu

Session P7_4a, ID 96 (Board No. 54)

Segmented-Beat Modulation Method-Based Procedure for Extraction of Electrocardiogram-Derived Respiration from Data Acquired by Wearable Sensors During High-Altitude Activity

Agnese Sbröllini, Danilo Bondi, Sofia Romagnoli, Micaela Morettini, Ilaria Marcantoni, Tiziana Pietrangelo, Vittore Verratti, Laura Burattini

Session P7_4a, ID 192 (Board No. 55)

Automated Detection of Ventricular Heartbeats from Electrocardiogram (ECG) acquired during Magnetic Resonance Imaging

Pierre Aublin, Jacques Felblinger, Julien Oster

Session P7_4a, ID 204 (Board No. 56)

Relationship between ECG-pattern of depolarization abnormalities and an mildly reduced ejection fraction

Maria Gordeeva, Irina Serdiukova, Elena Parmon, Alexander Krasichkov

15:45 - 17:45 Session P7_5a - Modeling Ion Channels and Cells

Session P7_5a, ID 74 (Board No. 57)

A simulation study on the effect of antiarrhythmic drugs during myocardial infarction

Cuiping Liang, Cunjin Luo, Qince Li, Jun Liu³, Suiping Jiang

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Session P7_5a, ID 356 (Board No. 58)

Normalisation of Action Potential Data Recorded with Sharp Electrodes Maximises Its Utility for Model Development

Yann-Stanislas Barral, Liudmila Polonchuk, Gary Mirams, Michael Clerx, Guy Page, Katrina Sweat, Najah Abi-Gerges, Ken Wang, David Gavaghan

Session P7_5a, ID 51 (Board No. 59)

Modelling the Effect of Intracellular Calcium in the Rundown of L-Type Calcium Current

Aditi Agrawal, Michael Clerx, Ken Wang, Liudmila Polonchuk, David Gavaghan, Gary Mirams

Session P7_5a, ID 287 (Board No. 60)

Derivative-based Inference for Cell and Channel Electrophysiology Models

Michael Clerx¹, David Augustin², Alister Dale-Evans², Gary Mirams¹

15:45 - 17:45 Session P7_5b - Modeling Cardiac Tissue

Session P7_5b, ID 37 (Board No. 61)

Mechanical Consequences of Electrical Remodeling due to Persistent Atrial Fibrillation: a Cellular Level Sensitivity Analysis

Jorge Sánchez and Axel Loewe

Session P7_5b, ID 296 (Board No. 62)

Cellular Heterogeneity in the Atria: An in-silico Study in the Impact on Re-entries.

Jordan Elliott, Daniele Cinque, Luca Mainardi, Jose F Rodriguez Matas

Session P7_5b, ID 258 (Board No. 63)

Effects of Long- and Short-term Memory on Action Potential Duration for Atrial Cellular Automata

Giada Sira Romitti, Pau Romero de Antonio, Alejandro Liberos Mascarell, Dolors Serra Almor, Ignacio García Fernandez, Miguel Lozano Ibañez, Rafael Sebastian Aguilar, Miguel Rodrigo Bort

Session P7_5b, ID 233 (Board No. 64)

Toward a quasi-dynamic pulsed field electroporation numerical model for cardiac ablation: Predicting tissue conductance changes and ablation lesion patterns

Richard Simon, Nishaki Mehta, Kuldeep Shah, David Haines, Cristian Linte

15:45 - 17:45 Session PA_6 - Medical Informatics and Technology

Session PA_6, ID 302 (Board No. 65)

Aerobic Fitness Level Estimation Using Wearables

Radovan Smisek, Andrea Nemcova, Lukas Smital, Daniela Chlibkova, Martin Kralik, Jana Kolarova, Vojtech Myska, Martin Kolarik, Jaromir Hubalek

15:45 - 17:45 Session PA_7 - System Study and Heart Rate Variability

Session PA_7, ID 265 (Board No. 66)

Autonomic Nervous System Recovery after Various Exercises in Highly Trained Athletes

Lucie Saclova, Andrea Nemcova, Radovan Smisek, Marina Ronzhina, Lukas Smital, Martin Vitek

15:45 - 17:45 Session P7_8 - Challenge

Session P7_8, ID 1 (Board No. 67)

Classification of phonocardiograms using residual convolutional neural network and MLP

Guohui Peng, Haitao Zou, Jin Wang

Session P7_8, ID 7 (Board No. 68)

Heart murmur classification with time-frequency representations of phonocardiograms and transfer-learning

Anna McCann and Jean-Marc Vesin

Session P7_8, ID 27 (Board No. 69)

Convolutional Recurrent Neural Networks for Heart Murmur Detection

Lampros Kokkalas, Nicolas Tatlas, Stelios Potirakis

Session P7_8, ID 31 (Board No. 70)

Location-wise Heart Murmur Detection using CNN-Transformers

Yingyu Yang and Maxime Sermesant

Session P7_8, ID 35 (Board No. 71)

Ensemble Transformer-Based Neural Networks Detect Heart Murmur In Phonocardiogram Recordings

Mohanad Alkhodari, Syafiq Azman, Leontios Hadjileontiadis, Ahsan Khandoker

Session P7_8, ID 41 (Board No. 72)

Classification of heart murmurs using an ensemble of residual CNNs

Petr Nejedly, Jan Pavlus, Radovan Smisek, Zuzana Koscova, Eniko Vargova, Ivo Viscor, Pavel Jurak, Filip Plesinger

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Session P7_8, ID 43 (Board No. 73)

Convolutional neural network approach for heart MurMur detection in auscultation signals using wavelet transform based features

Robertas Petrolis, Renata Paukstaitiene, Gabriele Rudokaite, Andrius Macas, Arturas Grigaliunas, Algimantas Krisciukaitis

Session P7_8, ID 47 (Board No. 74)

Detection of murmurs from heart sound recordings with deep residual networks

Lei Hu, Wenjie Cai, Xinyue Li, Jia Li

Session P7_8, ID 65 (Board No. 75)

Classification of Murmurs in PCG Using Combined Frequency Domain and Physician Inspired Features

Julia Ding, Jing-Jing Li, Max Xu

Session P7_8, ID 67 (Board No. 76)

Murmur Identification Using Supervised Contrastive Learning

Ľubomír Antoni, Erik Bruoth, Alexander Szabari, Gabriela Vozáriková, Peter Bugata2 Peter Bugata Jr., Dávid Gajdoš, Dávid Hudák, Vladimíra Kmečová, Monika Staňková

Session P7_8, ID 69 (Board No. 77)

Automatic Screening of Murmurs applying MFCC and Tensor Based Analysis on Multiple Heart Sound Signals

Nidhi Sawant and Shivnarayan Patidar

Session P7_8, ID 71 (Board No. 78)

Deep Learning Based Heart Murmur Detection using Frequency-time Domain Features of Heartbeat Sounds

Jungguk Lee, Taein Kang, Narin Kim, Soyul Han, Hyejin Won, Wuming Gong, Il-Youp Kwak

Session P7_8, ID 72 (Board No. 79)

Murmur Classification with U-net State Prediction

Sanghoon Choi, Hyo-Chang Seo, Kyungmin Choi, Giwon Yoon, Segyeong Joo

Session P7_8, ID 84 (Board No. 80)

Classification of Phonocardiogram Recordings using Vision Transformer Architecture

Joonyeob Kim, Gibeom Park, Bongwon Suh

Session P7_8, ID 108 (Board No. 81)

Phonocardiogram Classification Using 1-Dimensional Inception Time Convolutional Neural Networks

Bjørn-Jostein Singstad, Lars Bongo, Markus Johnsen, Johan Ravn, Antony Gitau, Henrik Schirmer

Session P7_8, ID 114 (Board No. 82)

Heart Murmur Detection from Phonocardiogram Based on Residual Neural Network with Classes Distinguished Focal Loss

Pan Xia, Yicheng Yao, Changyu Liu, Hao Zhang, Yuqi Wang, Lirui Xu, Lidong Du, Yusi Zhu, Zhen Fang

Session P7_8, ID 115 (Board No. 83)

Heart Murmur Detection from PCG Signals Using an Ensemble Convolutional Neural Network

Baiju Yan

Session P7_8, ID 130 (Board No. 84)

Searching for Effective Neural Network Architectures for Heart Murmur Detection from Phonocardiogram

Hao Wen and Jingsu Kang

Session P7_8, ID 144 (Board No. 85)

Heart Murmur Detection and Clinical Outcome Prediction using Multilayer Perceptron Classifier

Kiarash Jalali, Mohammad Amin Saket, Saman Noorzadeh

Session P7_8, ID 151 (Board No. 86)

Developing an LSTM-based Listener for Early Detection of Heart Disease

Philip Gemke, Nicolai Spicher, Tim Kacprowski

Session P7_8, ID 152 (Board No. 87)

ReverbNet: Heart Murmur Detection from the Perspective of Acoustic Properties

Shuo Meng

Session P7_8, ID 165 (Board No. 88)

Automatic Heart Murmur Detection Using a Convolutional Neural Network

Hui Lu and Julia Yip

Session P7_8, ID 172 (Board No. 89)

Heart Murmur Detection of PCG Using ResNet with Selective Kernel Convolution

Yonghao Gao, Lihong Qiao, Zhixiang Li

Session P7_8, ID 178 (Board No. 90)

Heart Sound Classification Algorithm Based on Neural Network

Rui Yu, Guangyu Bin, Ziyang Xu, Fengya Liu, Zhenbo Han

Session P7_8, ID 181 (Board No. 91)

Transformer embedded with learnable filters for heart murmur detection

Pengfei Fan, Yucheng Shu, Yiming Han

Wednesday, September 7, 2022

12:00 - 14:00 Lunch and Poster Session

12:00 - 14:00 Session PA_3b - Atrial Arrhythmias: Endocardiography

Session PA_3b, ID 48 (Board No. 1)

Can sequentially collected electrograms be effectively used for dominant frequency mapping during persistent AF?

Xin Li, Charlie Hugill, Gavin Chu, Mahmoud Ehresh, Tiago Paggi de Almeida, Bharat Sidhu, Ibrahim Anton, Ahmed Kotb, Peter Stafford, G. Andre Ng, Fernando Schlindwein

Session PA_3b, ID 105 (Board No. 2)

Using High-resolution voltage maps to predict “redo” in the treatment of atrial fibrillation (AF)

Jean Bragard, Leire Moriones, Blas Echebarria, Susana Ravassa, Ignacio García-Bolao

Session PA_3b, ID 142 (Board No. 3)

Cycle length estimation using accurate adaptive detection of local activations in atrial intracardiac electrograms

Dinara Veshchezerova, Clement Bars, Julien Seitz

Session PA_3b, ID 145 (Board No. 4)

Far-field Intracardiac Electrograms Removal Enables Highly Reliable Automatic Cycle Length Estimation During Atrial Arrhythmias

Thomas Boudou, Julien Seitz, Clément Bars

Session PA_3b, ID 155 (Board No. 5)

Fibrosis Reduces the Coincidence of Repetitive Activations Patterns between the Coronary Sinus and Atrial Regions in Simulated Atrial Fibrillation

Margot van Montfoort, Victor Marques, Ozan Özgül, Ali Gharaviri, Simone Pezzuto, Angelo Auricchio, Pietro Bonizzi, Ulrich Schotten, Stef Zeemering

Session PA_3b, ID 174 (Board No. 6)

Tracking of Atrial Fibrillation Drivers Based on Propagation Patterns: an In-Silico Study

Victor Marques, Ali Gharaviri, Simone Pezzuto, Angelo Auricchio, Pietro Bonizzi, Stef Zeemering, Ulrich Schotten

Session PA_3b, ID 227 (Board No. 7)

Electrogram-based estimation of myocardial conduction using deep neural networks

Konstantinos Ntagiantas, Dimitrios Panagopoulos, Wing Poon, Danya Agha-Jaffar, Nicholas Peters, Chris Cantwell, Anil Bharath, Rasheda Chowdhury

Session PA_3b, ID 360 (Board No. 8)

Computer Simulations of Composite Maps for Detection of Atrial Fibrillation Mechanisms

Ozan Özgül, Victor Marques, Ben Hermans, Arne van Hunnik, Sander Verheule, Ulrich Schotten, Ali Gharaviri, Simone Pezzuto, Angelo Auricchio, Pietro Bonizzi, Stef Zeemering

Session PA_3b, ID 404 (Board No. 9)

Non-contact heart chamber modeling using catheter mediated ultrasound returns

Steve Yon

12:00 - 14:00 Session P7_4b - BSPM and ECGI

Session P7_4b, ID 160 (Board No. 10)

Modeling Structural Abnormalities in Equivalent Dipole Layer Based ECG Simulations

Manon Kloosterman, Machteld Boonstra, Folkert Asselbergs, Peter Loh, Thom Oostendorp, Peter van Dam

Session P7_4b, ID 175 (Board No. 11)

Analysis of Atrial Fibrillation Dynamics in Body Surface Potential Maps and Electrocardiographic Imaging

Rubén Molero Alabau, Olivier Meste, Joel Karel, Ralf Peeters, Pietro Bonizzi, Maria de la Salud Guillem Sánchez

Session P7_4b, ID 187 (Board No. 12)

Effect of Torso Mesh Density on Electrocardiographic Imaging Resolution from Atrial Fibrillation Simulations

Rubén Molero Alabau, Ana González-Ascaso, Ismael Hernández-Romero, Andreu M. Climent, Maria de la Salud Guillem Sánchez

Session P7_4b, ID 205 (Board No. 13)

Validation of a Novel Imageless Non-Invasive Electrocardiographic Imaging for the Characterization of Atrial Tachycardias

Jana Reventós Presmanes, Eric Invers-Rubio, Elisenda Ferro, Ismael Hernández-Romero, Clara Herrero-Martín, Javier Milagro, David Lundback, Eduard Guasch, Jose Tolosana, Ivo Roca-Luque, María Guillem, Lluís Mont, Jean Guichard, Andreu Climent

Session P7_4b, ID 235 (Board No. 14)

Inference of Purkinje structure and ventricular conduction properties from clinical 12-lead electrocardiograms

Julia Camps, Rafael Sebastian, Lucas Berg, Zhinuo Jenny Wang, Xin Zhou, Cristian Trovato, Leto Riebel, James Coleman, Rafael Sachetto4, Brodie Lawson, Vicente Grau, Kevin Burrage, Alfonso Bueno-Orovio, Rodrigo Weber, Blanca Rodriguez

Wednesday, September 7, 2022

Session P7_4b, ID 260 (Board No. 15)

A Patient-Specific Equivalent Dipole Model

Gabriel Victorino Cardoso, Geneviève Robin, Andony Arrieula, Mark Potse, Michel Haïssaguerre, Eric Moulines, Remi Dubois

Session P7_4b, ID 275 (Board No. 16)

Effect of Segmentation Uncertainty on the ECGI Inverse Problem Solution and Source Localization

Narimane Gassa, Nejib Zemzemi, Machteld Boonstra, Beata Ondrusova, Jana Svehlikova, Dana Brooks, Ali Rababah, Rob MacLeod, Jess Tate, Peter Van Dam, Akil Narayan

Session P7_4b, ID 289 (Board No. 17)

Equivalent Dipole Trajectories Assessed From the 12-Lead ECG Using an Adaptable Human Torso Model

Vito Starc

Session P7_4b, ID 350 (Board No. 18)

A personalized pipeline to reduce ECGI-AF biomarkers disparity: a clinical-computational study

Gabriel Costa, Camila Restivo, Italo Sandoval Ramos de Oliveira, Maria de la Salud Guillem Sánchez, Joao Salinet

Session P7_4b, ID 362 (Board No. 19)

Dominant Frequency Estimation in AF from ECGI

Carlos Fambuena Santos, Ismael Hernández-Romero, Clara Herrero Martín, Jana Reventós Presmanes, Eric Invers Rubio, Luis Mont, Andreu M. Climent, Maria de la Salud Guillem Sánchez

Session P7_4b, ID 395 (Board No. 20)

Activation Sites Estimation using a Fast Algorithm Based on an Eikonal Equation

Jérôme Fehrenbach and Lisl Weynans

Session P7_4b, ID 403 (Board No. 21)

A Sliding Window Approach to Regularization in Electrocardiographic Imaging

Ben Orkild, Jake Bergquist, Lindsay Rupp, Anna Busatto, Brian Zenger, Wilson Good, Jaume Coll-Font, Rob MacLeod

12:00 - 14:00 Session PA_5c - Modeling Arrhythmias

Session PA_5c, ID 420 (Board No. 22)

In Silico Investigation of the Functional Effects of Long QT Syndrome Variant 3 on Electrical Conduction at PVJ

Cunjin Luo and Ying He

Session PA_5c, ID 89 (Board No. 23)

A Computational Model of Brugada Syndrome in 3D Heterogeneous Cardiac Tissue

Paolo Seghetti, Niccolò Biasi, Marco Laurino, Alessandro Tognetti

Session PA_5c, ID 143 (Board No. 24)

N2091S Mutation in L-type Calcium Channel Promotes Action Potential Alternans in M Cells of Human Ventricle: A Simulation Study

Yumin Shen, Na Zhao, Zhipeng Cai, Chengyu Liu, Jianqing Li

Session PA_5c, ID 104 (Board No. 25)

In-silico Inducibility of Ventricular Tachycardia in Patient-Specific Post-Infarction Ventricular Models

Javier Villar Valero, Juan Gomez, David Soto-Iglesias, Diego Penela, Antonio Berruezo, Beatriz Trenor

Session PA_5c, ID 45 (Board No. 26)

Mechanistic Investigations of Pro-arrhythmic Interplay Between Fibrosis, Ischemia and Ionic Remodelling in Hypertrophic Cardiomyopathy

James Coleman, Rubén Doste, Alfonso Bueno-Orovio

Session PA_5c, ID 392 (Board No. 27)

Modelling and Simulation Reveal Density-Dependent Re-Entry Risk in the Infarcted Ventricles after Stem Cell-Derived Cardiomyocyte Delivery

Leto Riebel, Zhinuo Wang, Hector Martinez-Navarro, Cristian Trovato, Jacopo Biasetti, Rafael Sachetto Oliveira, Rodrigo Weber dos Santos, Blanca Rodriguez

Session PA_5c, ID 188 (Board No. 28)

Physics-informed Fully Connected and Recurrent Neural Networks for Cardiac Electrophysiology Modelling

Ihsahe Olakorede, Iulia Nazarov, Ahmed Qureshi, Shaheim Ogbomo-Harmitt, Oleg Aslanidi

Session PA_5c, ID 218 (Board No. 29)

Impact of Fibrosis Border Zone Characterisation on Fibrosis-Substrate Isolation Ablation Outcome for Atrial Fibrillation

Shaheim Ogbomo-Harmitt, Ahmed Qureshi, Andrew King, Oleg Aslanidi

12:00 - 14:00 Session PA_5d - Whole Heart Modeling

Session PA_5d, ID 24 (Board No. 30)

Sensitivity Analysis of ECG Features to Computational Model Input Parameters

Jenny Venton, Karli Gillette, Matthias Gsell, Axel Loewe, Claudia Nagel, Benjamin Winkler, Louise Wright

Session PA_5d, ID 399 (Board No. 31)

A comparison of multithreading, vectorization, and GPU computing for the acceleration of cardiac electrophysiology models

Chiheb Sakka, Amina Guermouche, Olivier Aumage, Emmanuelle Saillard, Mark Potse, Yves Coudière, Denis Barthou

Session PA_5d, ID 291 (Board No. 32)

Cardiac Function Assessment Using Personalized Reduced-Order Pulse Wave Modeling

Wednesday, September 7, 2022

Kamil Wołos and Jan Poleszczuk

Session PA_5d, ID 388 (Board No. 33)

Accelerating stabilization of whole-heart models after changes in cycle length

Syed Hassaan Ahmed Bukhari, Carlos Sánchez, Esther Pueyo, Mark Potse

12:00 - 14:00 Session PA_6 - Medical Informatics and Technology

Session PA_6, ID 2 (Board No. 34)

Probabilistic Inference of Comorbidities from Symp-toms in Patients with Atrial Fibrillation: An Ontology-Driven Hybrid Clinical Decision Support System

Alexander Lacki, Diego Diego Boscá Tomás, Antonio Martínez-Millana

Session PA_6, ID 134 (Board No. 35)

Accuracy of Kubios HRV software respiratory rate estimation algorithms

Jukka Lipponen and Mika Tarvainen

Session PA_6, ID 189 (Board No. 36)

Optimal Fluid and Vasopressor Interventions in Septic ICU Patients Through Reinforcement Learning Model

Maximiliano Mollura, Cristian Drudi, Li-wei Lehman, Riccardo Barbieri

Session PA_6, ID 321 (Board No. 37)

Automated Identification of Label Errors in Large Electrocardiogram Datasets

Peter Doggart and Alan Kennedy

Session PA_6, ID 328 (Board No. 38)

Multimodal Analysis of Physiological Signals for Wearable-Based Emotion Recognition Using Machine Learning

Feryal Alskafi, Ahsan Khandoker, Uichin Lee, Cheul Park, Herbert Jelinek

Session PA_6, ID 339 (Board No. 39)

Detecting Intrapartum Fetal Hypoxia from Cardiotocography using machine learning

Farah Francis, Honghan Wu, Saturnino Luz, Sarah Stock, Rosemary Townsend

Session PA_6, ID 401 (Board No. 40)

AI Based Directory Discovery Attack and Prevention of the Cardiac Medical Diagnosis Systems

Ying He and Cunjin Luo

Session PA_6, ID 25 (Board No. 41)

Use of Recurrent Neural Networks for Mean Blood Pressure Prediction Based on Impedance Cardiography Measurements

Marek Żyliński, Gerard Cybulski, Wiktor Niewiadomski

Session PA_6, ID 167 (Board No. 42)

Machine learning of drug influence based on iPSC cardiomyocyte calcium transient signals

Martti Juhola, Henry Joutsijoki, Risto-Pekka Pölönen, Katriina Aalto-Setälä

Session PA_6, ID 177 (Board No. 43)

In silico assessment of a multihole electrode design for High Power Short Duration ablation

Argyrios Petras, Massimiliano Leoni, Zoraida Moreno Weidmann, Jose Guerra, Luca Gerardo-Giorda

Session PA_6, ID 253 (Board No. 44)

Effect of lower limb muscles activity on postural control in Parkinson's patients with orthostatic hypotension

Rabie Fadil, Asenath Huether, Andrew Blaber, Jau-Shin Lou, Kouhyar Tavakolian

Session PA_6, ID 277 (Board No. 45)

Naive Bayesian-based nomogram for identification of early asymptomatic Dilated Cardiomyopathy

Aleksandar Miladinovic, Katerina Iscra, Milos Ajcevic, Luca Restivo, Simone Kresevic, Marco Merlo, Gianfranco Sinagra, Agosino Accardo

Session PA_6, ID 215 (Board No. 46)

Verification of the Assumptions of Volume-Clamp Method for Continuous Blood Pressure Measurement in a Silicone Phantom

Marek Żyliński and Gerard Cybulski

Session PA_6, ID 231 (Board No. 47)

Remote Monitoring of Cardiorespiratory Parameters in COVID-19 Patients Following Hospital Discharge

Ganesh Raam Kumarasamy, Hélène De Cannière, Julie Vranken, Michiel Jacobs, Peter Karsmakers, Pieter Vandervoort

Session PA_6, ID 259 (Board No. 48)

A validation study of two wrist worn wearable devices for remote assessment of exercise capacity

Alexandra Jamieson, Michele Orini, Siana Jones, Nish Chaturvedi, Alun Hughes

12:00 - 14:00 Session PA_7 - System Study and Heart Rate Variability

Session PA_7, ID 4 (Board No. 49)

Heart rate variability in heart transplant recipients with graft hypertrophy

Danuta Makowiec and Joanna Wdowczyk

Session PA_7, ID 9 (Board No. 50)

Using Signal Quality Assessment (SQA) to help sleep stage classification

Mahtab Mohammadpoorfaskhodi and Miguel Garcia-Gonzalez

Session PA_7, ID 14 (Board No. 51)

Comparison of Heart Rate Variability Indices Based on Seismocardiograms from Healthy Volunteers and Patients with Valvular Heart Diseases

Wednesday, September 7, 2022

Szymon Siecinski, Pawel Kostka, Ewaryst Tkacz

Session PA_7, ID 16 (Board No. 52)

Respiratory-Vagal Modulatory Effects of Cold Face Test on the High Frequency Components of Systolic and Diastolic Blood Pressure Variability

Alejandra Guillén-Mandujano, Salvador Carrasco-Sosa, Aldo Mejía-Rodríguez

Session PA_7, ID 77 (Board No. 53)

Comparison of signal combinations for cardiorespiratory sleep staging

Miriam Goldammer, Sebastian Zaunseder, Franz Ehrlich, Hagen Malberg

Session PA_7, ID 86 (Board No. 54)

Hidden Hazards Beneath Cross-Validation Methods in Machine Learning-Based Sleep Apnea Detection

Daniele Padovano, Arturo Martinez-Rodrigo, Jose Pastor, José J Rieta, Raul Alcaraz

Session PA_7, ID 133 (Board No. 55)

Circadian Modulation of Electrocardiographic Alternans in Kidney Failure Patients on Dialysis

Iliaria Marcantoni, Chiara Leoni, Claudia Peroni, Agnese Sbrollini, Micaela Morettini, Laura Burattini

Session PA_7, ID 140 (Board No. 56)

Physiologic Patients' Response to Fluid Administration in the Intensive Care Unit

Maximiliano Mollura, Claudia Salerni, Li-wei Lehman, Riccardo Barbieri

Session PA_7, ID 199 (Board No. 57)

Does Ectopic Beats Bring More Discriminatory Information to Diagnose Ischemic Heart Disease?

Katerina Iskra, Aleksandar Miladinovic, Milos Ajcevic, Luca Restivo, Simone Kresevic, Marco Merlo, Gianfranco Sinagra, Agostino Accardo

Session PA_7, ID 206 (Board No. 58)

Densely Connected Neural Network and Permutation Entropy in the Early Diagnostic in COVID patients

Luz Diaz, Maria Rodriguez, Diego Cornejo, Miguel Vizcardo, Antonio Ravelo, Esteban Alvarez, Victor Cabrera, Dante Condori-Merma

Session PA_7, ID 225 (Board No. 59)

Effects of Beta-Blocker on Heart Rate Variability of Heart Failure with Preserved Ejection Fraction

Shiza Saleem, Mohanad Alkhodari, Leontios Hadjileontiadis, Ahsan Khandoker, Herbert Jelinek

Session PA_7, ID 248 (Board No. 60)

Recovery Assessment of Open-heart Cardiac Surgery Patients Using Heart Rate Variability Parameters

Seyedsadra Miri, Sabina Lähteenmäki, Heidi Mahrberg, Antti Vehkaoja, Jari Laurikka, Jari Viik

Session PA_7, ID 284 (Board No. 61)

Reduced RR Interval Correlations of Long QT Syndrome Patients

Teemu Pukkila, Matti Molkkari, Jiyeong Kim, Esa Rasanen

Session PA_7, ID 293 (Board No. 62)

Derangement of Cardiovascular Regulatory Mechanisms in COVID-19 Patients in Intensive Care Unit and its Association with Mortality

Francesca Gelpi, Vlasta Bari, Beatrice Cairo, Beatrice De Maria, Noemi Cornara, Riccardo Colombo, Alberto Porta

Session PA_7, ID 313 (Board No. 63)

Approximate Entropy and Densely Connected Neural Network in the Early Diagnostic of Patients with Chagas Disease

Maria Rodriguez, Miguel Vizcardo, Antonio Ravelo, Esteban Alvarez, Luz Diaz, Diego Cornejo, Victor Cabrera, Dante Condori-Merma

Session PA_7, ID 327 (Board No. 64)

Investigating Phase Coherence between Respiratory Sinus Arrhythmia and Respiration in Depressed patients with Obstructive Sleep Apnea across the Sleep Stages

Yahya Alzaanbi and Ahsan Khandoker

Session PA_7, ID 343 (Board No. 65)

Generalization of Deep Sequence Models for Forecasting Aortic Pressure Cross-Cohort

Elise Jortberg, Alan Li, Zihao Zhou, Rose Yu

Session PA_7, ID 383 (Board No. 66)

Blood Pressure Classification by Analyzing the behavior of Heart Rate Variability in Poincare Plot

Shahab Rezaei, Keivan Maghooli, Nader Jafarnia Dabanloo, Fardad Farrokhi

Session PA_7, ID 417 (Board No. 67)

Feasibility of Wearable Armband Bipolar ECG Lead-1 for Long-term HRV Monitoring Using a Combined Signal Averaging and 2-stage Wavelet Denoising Technique

Omar Escalona, Sophie Magwood, Anna Hilton, Niamh McCallan

12:00 - 14:00 Session PA_8 - Challenge

Session PA_8, ID 198 (Board No. 68)

Beat-wise uncertainty learning for murmur detection in heart sounds

Xingyao Wang, Foli Fan, Hongxiang Gao, Shuo Zhang, Chenxi Yang, Jianqing Li, Chengyu Liu

Session PA_8, ID 201 (Board No. 69)

ACQuA: Anomaly Classification with Quasi-Attractors

William Rudman, Jack Merullo, Laura Mercurio, Carsten Eickhoff

Session PA_8, ID 241 (Board No. 70)

Heart Murmur Detection using Ensemble of Boosted Classifiers for Phonocardiograms Recorded from Multiple Auscultation Locations

Wednesday, September 7, 2022

Saman Parvaneh, Matt Song, Zaniar Ardalan

Session PA_8, ID 246 (Board No. 71)

Heart Murmurs Detection Using Traditional and Deep Learning Methods

YunChen Yen, Xueqiao Peng, Changchang Yin, Ping Zhang

Session PA_8, ID 249 (Board No. 72)

Maiby's Algorithm: A Two-stage Deep Learning approach for Murmur Detection in Mel Spectrograms for Automatic Auscultation of Congenital Heart Disease

Matheus Araujo, Dewen Zeng, Joao Palotti, Xinrong Hu, Yiyu Shi, Lee Pyles, Quan Ni

Session PA_8, ID 251 (Board No. 73)

Heart Murmur Detection Using Wavelet Time Scattering and Support Vector Machines

Adrian Cornely and Grace Mirsky

Session PA_8, ID 266 (Board No. 74)

A Deep Learning-based Heart Murmurs Detector

Daniel Eneriz, Antonio Rodriguez-Almeida, Himar Fabelo, Samuel Ortega, Francisco Balea-Fernandez, Nicolás Medrano, Belén Calvo, Gustavo Callico

Session PA_8, ID 272 (Board No. 75)

Automated Methods for the Detection of Heart Murmurs in Phonocardiography Recordings

Alexis Dorier, Shaun Davidson, Sotirakis Charalampos, Mauricio Villarroel Montoya

Session PA_8, ID 274 (Board No. 76)

Abnormal Waves Detection from Phonocardiogram Recordings using SE_ResNet with Sign Loss Function

Yangming Guo, Zhuo Liu, Xingzhi Sun

Session PA_8, ID 280 (Board No. 77)

Heart Murmur Detection in Phonocardiographic Signals Using Breathing Noise Suppression

Kristóf Müller and Dr. Márton Áron Goda

Session PA_8, ID 285 (Board No. 78)

Heart Murmur Detection Using an Ensemble Model Based on Multi-Feature Fusion

Yue Zhao, Zhuoyang Xu, Tingting Zhao

Session PA_8, ID 290 (Board No. 79)

End-To-End Model for Detecting Murmurs from Phonocardiograms Using Asymmetric Loss

Hussain Alasmawi and Mohammad Yaqub

Session PA_8, ID 292 (Board No. 80)

Heart Murmurs Detection from Phonocardiograms Using a Multi-input Deep Learning Model

Ali Rababah, Raymond Bond, Khaled Rjoob, Alan Kennedy, Peter Doggart, Magd Kotb, Dewar Finlay

Session PA_8, ID 298 (Board No. 81)

Listen to your heart: A self-supervised approach for detecting murmur in heart-beat sounds for the Physionet 2022 challenge

Aristotelis Ballas, Vasileios Papapanagiotou, Anastasios Delopoulos, Christos Diou

Session PA_8, ID 309 (Board No. 82)

Multi-Task Prediction of Murmur and Outcome from Heart Sound Recordings

Yale Chang, Luoluo Liu, Corneliu Antonescu

Session PA_8, ID 310 (Board No. 83)

A Fusion of Handcrafted Features and Deep Learning Classifiers for Heart Murmur Detection

Zaria Imran, Ethan Grooby, Chiranjibi Sitaula, Vinayaka Malgi, Sunil Aryal, Faezeh Marzbanrad

Session PA_8, ID 315 (Board No. 84)

Modified Variable Kernel Length ResNets for Heart Murmur Detection and Clinical Outcome Prediction using Multi-positional Phonocardiogram Recording

Vijay Vignesh Venkataramani, Akshit Garg, U. Deva Priyakumar

Session PA_8, ID 318 (Board No. 85)

Murmur Detection and Clinical Outcome Classification Using a VGG-like Network and Combined Time-Frequency Representations of PCG Signals

Zhongrui Bai, Baiju Yan, Xianxiang Chen, Yirong Wu, Peng Wang

Session PA_8, ID 322 (Board No. 86)

Two-stage Detection of Murmurs from Phonocardiograms using Deep and One-class Methods

Sara Summerton, Darcy Murphy, Danny Wood, Matti Kaisti, Gavin Brown, David Wong

Session PA_8, ID 329 (Board No. 87)

Detecting Murmurs in Phonocardiogram Recordings Using Feature Based Ensemble Learning

Mohammed Baydoun, Hassan Ghaziri, Ali El-Hajj, Lise Safatly

Session PA_8, ID 355 (Board No. 88)

Multimodal Heart Murmur Detection through Path Signature

Felix Krones, Benjamin Walker, Adam Mahdi, Ivan Kiskin, Terry Lyons

Session PA_8, ID 390 (Board No. 89)

Murmur Detection from Phonocardiogram Recordings using Spectral Features

Imad Eddine Toubal, Yang Yang Wang, Filiz Bunyak, Kannappan Palaniappan

Session PA_8, ID 393 (Board No. 90)

Classification of Heart Murmurs by a hybrid Deep-Learning Architecture based on Residual Convolutional Neural Networks and Attention-based Convolution-free Audio Spectrogram Transformers

Enrique Almar Muñoz, Marawan Elbatel, Santiago Jimenez, Conrado Calvo

Wednesday, September 7, 2022

Session PA_8, ID 406 (Board No. 91)

PCG Murmur Detection by GA ensemble of Scalogram Based Convolutional Neural Network and Random Forest Classifier

Muhammad Zoraiz Ramay and Muhammad Usman Akram

Session PA_8, ID 408 (Board No. 92)

Phonocardiographic Murmur Detection by Scattering-Recurrent Networks

Philip Warrick and Jonathan Afilalo

Session PA_8, ID 439 (Board No. 93)

Hierarchical Multi-Scale Convolutional Network for Murmurs Detection on PCG Signals

Yujia Xu, Xinqi Bao, Hak-Keung Lam, Ernest Kamavuako

Program overview

Monday, September 5, 2022

8:30	Welcome to CinC 2022	Duetto 1-2
8:45	RDYIA: Rosanna Degani Young Investigator Finals	Duetto 1-2
10:15	Coffee Break	
10:45	S21: ECG- Analysis: Ischemia and COVID-19	Duetto 1-2
	S22: Atrial Arrhythmias: Electrocardiography	Sopraano
	S23: Heart Rate Variability in Antepartum and Peripartum	Sonaatti 1
	S24: Cardiovascular Imaging	Opus 3
12:15	Social Event	

Tuesday, September 6, 2022

8:30	S31: ECG-Analysis: SCD and LVH	Duetto 1-2
	S32: Atrial Arrhythmias: Endocardiography 1	Sopraano
	S33: Methods for Heart Rate and Cardiovascular Variability Analysis	Sonaatti 1
	S34: Special Session: Non-invasive blood pressure monitoring	Opus 3
10:00	Coffee break	
10:15	S41: ECG Analysis: Signal Processing Techniques	Duetto 1-2
	S42: Atrial Arrhythmias: Endocardiography 2	Sopraano
	S43: Photoplethysmography I	Opus 3
	S44: Special Session: Addressing and assessing uncertainty in cardiac simulations	Sonaatti 1
11:45	Lunch	
12:30	S51: ECG Analysis: Clinical Applications	Duetto 1-2
	S52: Atrial Arrhythmias	Sopraano
	S53: Modeling Ion channels and Cells	Sonaatti 1
	S54: The George B. Moody PhysioNet Challenge 2022 - I	Opus 3
14:00	Coffee break	
14:15	S61: Modeling Arrhythmias	Duetto 1-2
	S62: Photoplethysmography II	Opus 3
	S63: BSPM & ECGI Technical Advances	Sonaatti 1
	S64: The George B. Moody PhysioNet Challenge 2022 - II	Sopraano
15:45	Poster Session with Coffee	

Wednesday, September 7, 2022

8:30	S81: Modeling Drug Effects and other Species	Duetto 1-2
	S82: Medical Informatics and Technology I	Opus 3
	S83: BSPM & ECGI Applications	Sonaatti 1
	S84: Special Session: Multidisciplinary research in atrial fibrillation	Sopraano
10:00	Coffee break	
10:30	S91: Whole Heart Modeling	Duetto 1-2
	S92: Medical Informatics and Technology II	Sopraano
	S93: Cardiovascular System Regulation	Sonaatti 1
	S94: Cardiovascular Mechanics	Opus 3
12:00	Lunch and Poster Session	
14:00	SB1: Ventricular Arrhythmias	Sopraano
	SB2: Ballistocardiography and Seismocardiography	Opus 3
	SB3: ECG and Sleep Disorders	Sonaatti 1
	SB4: YIA semi-finalists	Duetto 1-2
15:00	CP: Closing Plenary	Duetto 1-2
16:00	Awards & Closing Remarks	