



# ICE 2019

## International Congress on Electrocardiology Joint meeting of ISHNE and ISE

May 30 - June 1, 2019  
Crowne Plaza Hotel • Belgrade, Serbia  
[www.ice2019.com](http://www.ice2019.com)

The joint meeting of the 45<sup>th</sup> Congress of the International Society of Electrocardiology (ISE) and the 18<sup>th</sup> Congress of the International Society for Holter and Noninvasive Electrocardiology (ISHNE) in conjunction with the 11<sup>th</sup> Congress of Neurocard (SCNS)



**PROGRAM**

# FACULTY LIST

Adrian Baranchuk	Canada
Aleksandra Djokovic	Serbia
Andres Ricardo Perez-Riera	Brazil
Antoni Bayes de Luna	Spain
Antonio Raviele	Italy
Bartosz Szafran	Poland
Bassim Mohammad	Iraq
Bozidar Ferek Petric	Croatia
Branislav Milovanovic	Serbia
Branko Beleslin	Serbia
Brian Olshansky	United States
Brian Wisnoskey	United States
Bulent Gorenek	Turkey
Carlos Pastore	Brazil
Cristian Podoleanu	Romania
Danila Potyagaylo	Germany
Dejan Vukajlovic	Serbia
Dmitry Duplyakov	Russia
Dragan Kovacevic	Serbia
Dragana Bajic	Serbia
Elena V. Zaklyazminskaya	Russia
Emanuela Locati	Italy
Ewa Piotrowicz	Poland
Falko Skrabal	Austria
Felix Ayala- Paredes	Canada
Friedrich Kohler	Germany
Gary Tse	China
Goran Krstacic	Croatia
Goran Milasinovic	Serbia
Ivan Cakulev	United States
Iwona Cygankiewicz	Poland
Jayakumar Sahadevan	United States

Jerzy Krzysztof Wranicz	Poland
Jonathan Steinberg	United States
Jorge I. Celis	Colombia
Kjell Nikus	Finland
Konstantino Letsas	Greece
Krassimira Hristova	Bulgaria
Krzysztof Kaczmarek	Poland
Larisa Balykova	Russia
Leonid Makarov	Russia
Lin Yee Chen	United States
Ljuba Bacharova	Slovakia
Ljudmila Stojanovich	Serbia
Ludovit Gaspar	Slovakia
Luigi De Ambroggi	Italy
Malgorzata Kurpesa	Poland
Marcio Sturmer	Canada
Marek Jastrzebski	Poland
Marija Andjelkovic	Serbia
Marija Zdravkovic	Serbia
Mark Haigney	United States
Mark Potse	The Netherlands
Miguel Fiol	Spain
Milan Tysler	Slovakia
Milica Vukasinovic Vesic	Serbia
Mina Chung	United States
Miodrag Ostojic	Serbia
Najeeb Osman	United States
Natasa Stanisavljevic	Serbia
Nelson Samesima	Brazil
Nikola Vojvodic	Serbia
Nina Japundzic	Serbia
Niraj Varma	United States

# FACULTY LIST

Parvin Dorostkar	United States
Paul Malik	Canada
Pawel Krzesinski	Poland
Pawel Ptaszynski	Poland
Peter MacFarlane	United Kingdom
Peter van Damm	Switzerland
Philipp Kopylov	Russia
Philippe Chevalier	France
Polychronis Dilaveris	Greece
Przemyslaw Guzik	Poland
Pyotr Platonov	Sweden
Reuven Zimlichman	Israel
Ricard Cervera	Spain
Richard Verrier	United States
Rob MacLeod	United States
Rod Passman	United States
Ryszard Piotrowicz	Poland
Sam Johnston	United States
Sanja Pavlovic	Serbia
Sergio Dubner	Argentina
Sladjana Jovanovic	Serbia
Stevan Jokic	Serbia
Suave Lobodzinski	United States
Takanori Ikeda	Japan
Thomas Klinghenben	Germany
Tom Ribeiro	Brazil
Valentina Kutyaifa	United States
Vass Vassilikos	Greece
Vera Komoliatova	Russia
Yochai Birnbaum	United States
Zareba Wojciech	United States

# PROGRAM

30 MAY 2019, THURSDAY

07:00-08:30 **ISHNE Board Meeting** Meeting Room 4

08:30-09:00 **Congress Opening Welcome** Meeting Room 1

*Branislav Milovanovic, President of the Congress ICE 2019*  
*Niraj Varma, President of ISHNE*  
*Adrian Baranchuk, President of ISE*  
*Mladen Sarcevic, Minister, Ministry of Education, Science and Technological Development of the Republic of Serbia*  
*Vladimir Popovic, State secretary, Ministry of Education, Science and Technological Development of the Republic of Serbia*  
*Zlatibor Loncar, Minister, Ministry of Health of the Republic of Serbia*  
*Ana Djordjevic Dikic, President of Cardiology Society of Serbia*  
*Radoje Colovic, President of Serbian Medical Society*  
*Ilija Brceski, European Academy Of Sciences And Arts*

09:00-17:00 **Poster Presentations**

**QRS as a key selection criterion for CRT** Meeting Room 1  
Chairmen: **Branislav Milovanovic, Wojciech Zareba**

09:10-09:30 **QRS duration or morphology: What really matters for CRT selection?**  
*Jayakumar Sahadevan (USA)*

09:30-09:50 **Which definition of LBBB should I apply?**  
*Ljuba Bacharova (Slovakia)*

09:50-10:10 **Do we need machine learning to select the right patient for CRT?**  
*Mina Chung (USA)*

10:10-10:30 **Should QRS duration be recalibrated to body size in selecting patients for CRT?**  
*Niraj Varma (USA)*

**Wearable monitoring** Meeting Room 2  
Chairmen: **Emanuela Locati, Suave Lobodzinski**

09:10-09:30 **Available technologies; how do they work and how accurate are they?**  
*Jonathan Steinberg (USA)*

09:30-09:50 **What are limitations of wearable ECGs?**  
*Polychronis Dilaveris (Greece)*

09:50-10:10 **Self monitoring and self medication: NOAC for AF**  
*Rod Passman (USA)*

10:10-10:30 **Cybersecurity**  
*Adrian Baranchuk (Canada)*

# PROGRAM

## Athletes and sudden death risk

Meeting Room 3

Chairmen: Brian Olshansky, Ludovit Gaspar

- 09:10-09:30 **Arterial hypertension in young athletes**  
*Larisa Balykova (Russia)*
- 09:30-09:50 **Syncope in athletes: When to worry?**  
*Leonid Makarov (Russia)*
- 09:50-10:10 **The changes of QT interval in standing position - new marker of LQ**  
*Vera Komoliatova (Russia)*
- 10:10-10:30 **Eligibility and disqualification of competitive athletes with aortic diseases -holistic approach**  
*Marija Anđelkovic (Serbia) and Milica Vukašinović Vesić (Serbia)*
- 10:30-10:50 **Coffee Break**

## Electrocardiology in risk stratification

Meeting Room 1

Chairmen: Takanori Ikeda, Richard Verrier

- 10:50-11:10 **ECG predictors of cardiac mortality through our experience**  
*Takanori Ikeda (Japan)*
- 11:10-11:30 **Role of noninvasive imaging for predictions of sudden cardiac death**  
*Krassimira Hristova (Bulgaria)*
- 11:30-11:50 **Machine learning techniques: New approach in risk stratification**  
*Branislav Milovanovic (Serbia)*
- 11:50-12:10 **ECG & VCG aspects in brugada and RV dysplasia**  
*ECG & VCG aspects in Brugada and RV cardiomyopathy*
- 12:10-12:30 **ECG risk stratificationin candidates for TAVI**  
*Paul Malik (Canada)*

## Sports cardiology

Meeting Room 2

Chairmen: Luigi De Ambroggi, Leonid Makarov

- 10:50-11:10 **CAD in athletes – how to manage**  
*Brian Olshansky (USA)*
- 11:10-11:30 **Sudden cardiac death in athletes - What's new ? (2019 update)**  
*Iwona Cygankiewicz (Poland)*

# PROGRAM

**11:30-11:50** ECG preparticipation screening - debate continues (USA vs Europe)  
*Mark Haigney (USA)*

**11:50-12:10** T wave inversion in athletes  
*Peter Macfarlane (UK)*

**12:10-12:30** Cardiac arrhythmias in athletes / AFib in athletes  
*Philippe Chevalier (France)*

**10:30-12:00** **Oral Abstracts** **Meeting Room 3**  
**Chairmen: Miguel Fiol, Jerzy Krzysztof Wranicz**

**10:30-10:45** J-Wave in ischemic conditions – is it really an early repolarization?  
*Alena Tsvetkova, Yan Azarov, Alexey Ovechkin, Olesya Bernikova, Marina Vaykshnorayte, Marina Demidova and Pyotr Platonov*

**10:45-11:00** Diagnostic yield of the target gene panels testing in Russian patients with arrhythmogenic right ventricular cardiomyopathy and overlapping phenotypes  
*Anna Shestak, Anna Bukaeva, Olga Blagova, Yulia Lutokhina, Margarita Polyak, Sergei Dzemeshevich and Elena Zaklyazminskaya*

**11:00-11:15** Antiarrhythmic effect of melatonin is associated with enhanced myocardial connexin-43 and PKC- signaling in male hypertensive and female obese rats  
*Narcisa Tribulova, Tamara Egan Benova, Barbara Szeiffova Bacova, Vladimir Knezl and Miroslav Barancik*

**11:15-11:30** A feasibility study to evaluate activation patterns during simultaneous biventricular pacing based on different ECGI algorithms  
*Stepan Zubarev, Mikhail Chmelevsky, Danila Potyagaylo, Margarita Budanova and Dmitry Lebedev*

**11:30-11:45** Comparison of CARTO LAT maps and non-invasive activation maps created using algorithms of Tikhonov Regularization for electrical potentials  
*Margarita Budanova, Mikhail Chmelevsky, Danila Potyagaylo, Stepan Zubarev, Aleksey Tsyganov and Tatjana Treshkur*

**12:30-13:30** **Lunch Break**

**Diagnosis and management of unexplained Meeting Room 1  
syncope**

**Chairmen: Dmitry Duplyakov, Thomas Klingenhoben**

**13:30-13:50** Current challenges with syncope patients  
*Antonio Raviele (Italy)*

# PROGRAM

- 13:50-14:10**    **Autonomic disorders and syncope**  
*Brian Olshansky (USA)*
- 14:10-14:30**    **Syncope in athletes: What is the best diagnostic pathway?**  
*Felix Ayala-Paredes (Canada)*
- 14:30-14:50**    **What ECG markers are available for identifying cardiogenic syncope?**  
*Sam Johnston (USA)*
- 14:50-15:10**    **Neuroablation in syncope**  
*Krzysztof Kaczmarek (Poland)*

**15:10-15:50**    **Coffee Break**

**New insights into AF mechanisms**

**Meeting Room 2**

**Chairmen: Jonathan Steinberg, Mark Potse**

- 13:30-13:50**    **P wave indices: Improving stroke prediction in AF**  
*Lin Yee Chen (USA)*
- 13:50-14:10**    **Advanced interatrial block as a risk factor for atrial fibrillation and stroke**  
*Antoni Bayes de Luna (Spain)*
- 14:10-14:30**    **Can P Wave wavelet analysis predict atrial fibrillation**  
*Vass Vassilikos (Greece)*
- 14:30-14:50**    **Atrial fibrillation dynamics**  
*Mark Potse (The Netherlands)*
- 14:50-15:10**    **Epicardial contact mapping**  
*Jayakumar Sahadevan (USA)*

**Basic science**

**Meeting Room 3**

**Chairmen: Leonid Makarov, Nina Zigon Japundzic**

- 13:30-13:50**    **Pluripotent stem cells in sudden cardiac death research**  
*Mark Haigney (USA)*
- 13:50-14:10**    **A comparative study to illustrate the effects of Beta-1 adrenergic receptor allelic polymorphism on disease outcome in Iraqi patients with acute coronary syndrome (on metoprolol therapy)**  
*Bassim I Mohammad (Iraq)*
- 14:10-14:30**    **Deep phenotyping of Russian patients with brugada syndrome**  
*Elena V. Zaklyazminskaya (Russia)*
- 14:30-14:50**    **Beta adrenergic gene expression and cardiovascular variability in a rat model of doxorubicin induced cardiomyopathy**  
*Nina Japundzic (Serbia)*

# PROGRAM

## The his bundle and its arborizations

Meeting Room 1

Chairmen: Antoni Bayes de Luna, Sergio Dubner

15:30-15:50 Trifascicular or tetrafascicular nature of the left bundle branch - anatomy and LV depolarization  
*Andres Ricardo Perez-Riera (Brazil)*

15:50-16:10 The left septal fascicle – clinical implications  
*Ryszard Piotrowicz (Poland)*

16:10-16:30 His bundle pacing  
*Jonathan Steinberg (USA)*

16:30-16:50 SVTs using the proximal HPS  
*Najeeb Osman (USA)*

16:50-17:00 Discussions

## Heart Rate: Physiology, properties, tools for assess and clinical usefulness

Meeting Room 2

Chairmen: Pyotr Platonov, Iwona Cygankiewicz

15:30-15:50 Physiology of heart rate. Intrinsic rhythm and external regulation from autonomic nervous system  
*Pawel Ptaszynski (Poland)*

15:50-16:10 Clinical and epidemiological implications of heart rate  
*Tom Ribeiro (Brazil)*

16:10-16:30 ECG tools for HRV assessment. Why HRV is being killed by non-ECG based approach?  
*Przemyslaw Guzik (Poland)*

16:30-16:50 Prognostic significance of heart rate  
*Wojciech Zareba (USA)*

## 15:30-17:00 ISHNE best abstracts

Meeting Room 3

Chairmen: Niraj Varma, Takanori Ikeda

15:30-15:45 Smartwatch performance for the detection and quantification of atrial fibrillation  
*Jeremiah Wasserlauf, Cindy You, Ruchi Patel, Alexander Valys, David Albert and Rod Passman*



# PROGRAM

- 15:45-16:00**    **The usefulness of dual cardiac autonomic nervous modulation assessment for prediction of mortality in patients with relatively preserved left ventricular ejection fraction**  
*Toshio Kinoshita, Atsuko Abe, Ryo Wada, Kensuke Yano, Katsuya Akitsu, Masaya Shinohara, Hideki Koike, Hitomi Yuzawa, Takeya Suzuki, Tadashi Fujino and Takanori Ikeda*
- 16:00-16:15**    **Noninvasive beat-to-beat epi-endocardial mapping in patients with ventricular arrhythmias**  
*Mikhail Chmelevsky, Stepan Zubarev, Margarita Budanova, Danila Potyagaylo, Tatjana Treshkur and Dmitry Lebedev*
- 16:15-16:30**    **Should we take gestational age into consideration when assessing an ECG?**  
*Marina Pimenta, Nelson Samesima, Carlos Alberto Pastore, Vera Lucia Krebs, Gabriela Leal and Werther Carvalho*
- 16:30-16:45**    **Sensitivity to electrode placement of a novel automated ECG-vector algorithm to localize the PVC origin**  
*Peter van Dam, Roger Abächerli and Tobias Reichlin*
- 16:45-17:00**    **New electrocardiographic score for the prediction of atrial fibrillation: MVP ECG risk score (Morphology-voltage-P-wave duration)**  
*Bryce Alexander, Julia Milden, Sohaib Haseeb, Antoni Bayes-Genis, Roberto Elosua, Manuel Martínez-Sellés, Cynthia Yeung, Wilma Hopman, Antoni Bayes de Luna and Adrian Baranchuk*
- 20:00**            **Gala Dinner**

# PROGRAM

31 MAY 2019, FRIDAY

07:00-08:30 ISE Council Meeting Meeting Room 4

Pierre Rijnlant Memorial Lecture Meeting Room 1

Chairmen: Peter Macfarlane, Adrian Baranchuk

08:30-09:00 Big Data in Electrocardiography

*Tom Ribeiro (Brazil)*

09:00-18:15 Poster Presentations

Brugada syndrome Meeting Room 1

Chairmen: Kjell Nikus, Takanori Ikeda

9:00-9:20 Brugada phenocopy

*Adrian Baranchuk (Canada)*

9:20-9:40 Early repolarization vs brugada pattern

*Peter MacFarlane (UK)*

9:40-10:00 ECG diagnosis- RsR' in V1 lead and differential diagnosis

*Gary Tse (China)*

10:00-10:20 Risk Stratification using non-invasive ECG techniques in brugada syndrome

*Konstantino Letsas (Greece)*

10:20-10:40 Risk stratification in family members in brugada syncrome

*Malgorzata Kurpesa (Poland)*

Tachycardiomyopathy Meeting Room 2

Chairmen: Bulent Gorenek, Philippe Chevalier

09:00-09:20 When to ablate PVC

*Bulent Gorenek (Turkey)*

09:20-09:40 RV pacing

*Valentina Kutiyfa (USA)*

09:40-10:00 Atrial fibrillation

*Kjell Nikus (Finland)*

# PROGRAM

**10:00-10:20** Do tachycardia induced CM differ to other NICM?  
*Philippe Chevalier (France)*

**10:20-10:40** Noninvasive localization of premature ventricular contractions  
*Milan Tysler (Slovakia)*

## Innovations in Electrocardiology

Meeting Room 3

Chairmen: Branko Beleslin, Luigi DeAmbroggi

**09:00-09:20** Continuous assessment of late potentials by Holter-based signal-averaged ECGs over 24 hours  
*Takanori Ikeda (Japan)*

**09:20-09:40** Inhaled flecainide for accelerated conversion of new-onset atrial fibrillation  
*Richard Verrier (USA)*

**09:40-10:00** Exercise testing with the Combyn™ 12- channel ECG: Assessment of myocardial wall tension and aerobic thresholds by arterial impedance plethysmography  
*Falko Skrabal (Austria)*

**10:00-10:20** Heart rate variability disorders in young patient with ROHHAD syndrome  
*Larisa Balykova (Russia)*

**10:20-10:40** Approaches to assessment of the QT interval by holter monitoring  
*Leonid Makarov (Russia)*

**10:40-11:00** Coffee Break

## ECG Imaging Session

Meeting Room 1

Chairmen: Rob MacLeod, Mark Potse

**11:00-11:20** Anatomical localization of pacing sites in CRT patients  
*Danila Potyagaylo (Germany)*

**11:20-11:40** Improving the diagnostic value of the ECG: 3D anatomical view  
*Peter van Dam (Switzerland)*

**11:40-12:00** State of the art in ECG imaging – trends and future directions  
*Rob MacLeod (USA)*

**12:00-12:20** Towards practical ECG Imaging – standardization of the anatomical models  
*Suave Lobodzinski (USA)*

# PROGRAM

**12:20-12:40** ECG Imaging without imaging  
*Mark Potse (The Netherlands)*

**Sleep disordered breathing and atrial fibrillation: Mechanistic and clinical insights** Meeting Room 2

**Chairmen:** Ryszard Piotrowicz, Brian Olshansky

**11:00-11:20** Key considerations of sleep disordered breathing treatment in atrial fibrillation  
*Adrian Baranchuk (Canada)*

**11:20-11:40** Clarifying the role of the autonomic nervous system in sleep apnea and atrial arrhythmogenesis  
*Brian Olshansky (USA)*

**11:40-12:00** Novel questionnaire-based and wearable device monitoring approaches for the identification of sleep apnea and atrial fibrillation  
*Thomas Klingenhoben (Germany)*

**12:00-12:20** Holter monitoring in sleep disordered breathing diagnosis  
*Malgorzata Kurpesa (Poland)*

**12:20-12:40** P wave and P Wave vector morphology and AF  
*Pyotr Platonov (Sweden)*

**11:30 - 13:00** Oral Abstracts Meeting Room 3

**11:30-11:45** The advantage of Bachmann's-Bundle pacing combined with His-Bundle Pacing  
*Peter Stephan Wolff, Piotr Strozik, Jacek Marcin Zawadzki, Aleksandra Gajek, Dorota Zysko, Adam Cisielski, Agnieszka Slawuta and Jacek Gajek*

**11:45-12:00** The Use of Noninvasive Arrhythmia Mapping: A Single Center Experience  
*Zorana Mrsic, Matthew Needleman, Mark Haigney and Stephanie Andersen*

**12:00-12:15** Diurnal Index of Heart Rate for Risk Assessment in Patients with Permanent Atrial Fibrillation  
*Irena Kurcalte*

**12:15-12:30** The diagnostic trap of selective His – bundle pacing  
*Peter Stephan Wolff, Jakub Mercik, Piotr Strozik, Jacek Marcin Zawadzki, Aleksandra Gajek, Agnieszka Slawuta and Jacek Gajek*

**12:45-13:00** ISHNE General Assembly Meeting Room 1

**13:00-14:15** Lunch Break

# PROGRAM

<b>14:15-15:45</b>	<b>ISE Young Investigator Competition (YIC)</b> Chairmen: Rob MacLeod, Tom Ribeiro	<b>Meeting Room 1</b>
<b>14:15-14:30</b>	<b>Screening for atrial fibrillation using a mobile, single-Lead electrocardiogram in Canadian primary care clinics</b> <i>Cynthia Yeung, Adrian Baranchuk, Peter Guerra and Jeff Healey</i>	
<b>14:30-14:45</b>	<b>Prognostic value of ECG in patients with pulmonary embolism</b> <i>Irina Mullova, Tatyana Pavlova, Sergey Khokhlunov and Dmitry Duplyakov</i>	
<b>14:45-15:00</b>	<b>Can slow breathing exercise improve the autonomic nervous imbalance in chronic kidney disease patients?</b> <i>Kentaro Kaneko, Shin-ichi Sekizawa, Ryota Tochinai, Machiko Yamamoto and Masayoshi Kuwahara</i>	
<b>15:00-15:15</b>	<b>Research mentorship and leadership development for undergraduate students: A pilot study from the international health informatics study (IHIS) network</b> <i>Gary Tse, Ka Hou Christien Li, Rachel Wing Chuen Lai, Sohaib Haseeb and Adrian Baranchuk</i>	
<b>15:15-15:30</b>	<b>Radiotherapy for patients with cardiovascular Implantable electronic devices: An 11-year experience</b> <i>Cynthia Yeung, Bachar Hazim, Debra Campbell, Jim Gooding, Shirley Li, Ho Kit Tam, Wilma Hopman, Sanoj Chacko, Damian Redfearn, Chris Simpson, Hoshiar Abdollah and Adrian Baranchuk</i>	
<b>15:30-15:45</b>	<b>Association of ACE I/D, AGTR1 +1166A/C and AGTR2 -1332A/G gene variants with autonomous nervous system function in Serbian syncope patients</b> <i>Ivana Kolic, Ivan Zivotic, Tamara Djuric, Maja Zivkovic, Dragan Alavantic, Dusica Jovanovic, Branislav Milovanovic and Aleksandra Stankovic</i>	
<b>15:55-16:15</b>	<b>Coffee Break</b>	
	<b>Syncope</b> Chairmen: Emanuela Locati, Dmitry Duplyakov	<b>Meeting Room 2</b>
<b>14:15-14:35</b>	<b>Chronic fatigue syndrome and syncope: New approach in pathophysiology and therapy</b> <i>Branislav Milovanovic (Serbia)</i>	
<b>14:35-14:55</b>	<b>New therapeutic options for the reflex syncope</b> <i>Cristian Podoleanu (Romania)</i>	

# PROGRAM

- 14:55-15:15** Risk stratification in patients with syncope  
*Dmitry Duplyakov (Russia)*
- 15:15-15:35** Syncope, epilepsy or both  
*Nikola Vajvodic (Serbia)*
- 15:35-15:55** Autonomic tests in the evaluation of syncope – what stands in clinical practice?  
*Thomas Klingenhoben (Germany)*

## **New advances in cardiological techniques** Meeting Room 3

**Chairmen: Krassimira Hristova, Falco Skrabal**

- 14:15-14:35** Localization of MI: CMR - ECG correlations  
*Yochai Birnbaum (USA)*
- 14:35-14:55** ECG equivalents of ST-segment elevation MI  
*Kjell Nikus (Finland)*
- 14:55-15:15** Tracking interlead ECG heterogeneity for detection of arrhythmia risk  
*Richard Verrier (USA)*
- 15:15-15:35** Live demo of the Combyn™ 12- Channel ECG: Detecting heart failure, overhydration, Edema, sarcopenia and peripheral arterial occlusive disease during the routine ECG  
*Falko Skrabal (Austria)*
- 15:35-15:55** Cardiomagnetic resonance in diagnosis of heart failure  
*Marija Zdravković (Serbia)*

## **Optimization of cardiac resynchronization therapy** Meeting Room 1

**Chairmen; Niraj Varma, Valentina Kutiyfa**

- 16:15-16:35** ECG and holter  
*Wojciech Zareba (USA)*
- 16:35-16:55** Prolonged PR and benefit from CRT  
*Valentina Kutiyfa (USA)*
- 16:55-17:15** When ECG is sufficient, when the CRT memory, and when should we perform holter monitoring in patients with implanted devices?  
*Jerzy Krzysztof Wranicz (Poland)*
- 17:15-17:35** The automatic algorithms provided by the devices  
*Niraj Varma (USA)*

# PROGRAM

**17:35-17:55** CRT in patients with atrial fibrillation  
*Polychronis Dilaveris (Greece)*

**17:55-18:15** Cardiac rehabilitation in heart failure patients with CRT devices  
*Ewa Piotrowicz (Poland)*

**Chronic inflammation and cardiovascular diseases** Meeting Room 2  
Chairmen: Ljudmila Stojanovic, Ricard Cervera

**16:15-16:35** Neurologic and cardiovascular antiphospholipid syndrome (APS) Events:  
Lessons from the "Euro-Phospholipid project"  
*Ricard Cervera (Spain)*

**16:35-16:55** Chronic inflammation and coronary heart disease  
*Branko Beleslin (Serbia)*

**16:55-17:15** Beyond inflammation responses in the brain  
*Jorge I. Celis (Colombia)*

**17:15-17:35** Correlations between systemic cardiovascular APS manifestations:  
Lesions from the Serbian National Registry  
*Ljudmila Stojanovich (Serbia)*

**17:35-17:55** Relationship of the oxidative stress markers to main vascular  
manifestations of APS  
*Natasa Stanisavljevic (Serbia)*

**17:55-18:15** Prevalence and association of accelerated atherosclerosis and  
cardiovascular involvement in APS: a prospective long-term follow-up  
study  
*Aleksandra Djokovic (Serbia)*

**Artificial intelligence and biosignal processing** Meeting Room 3  
Chairmen: Goran Krstacic, Dragana Bajic

**16:15-16:35** Artificial intelligence: Clinical approach in different diseases  
*Branislav Milovanovic (Serbia)*

**16:35-16:55** Chaos - state of the (he)art  
*Goran Krstacic (Croatia)*

**16:55-17:15** Comparative analysis of machine learning techniques in cardiology  
*Sladjana Jovanovic (Serbia)*

**17:15-17:35** Artificial intelligence, features and dependency structures in patients  
with Lyme diseases  
*Dragana Bajic (Serbia)*

**17:35-17:55** Prediction of left ventricular ejection fraction by human or machine  
learning by standard ECG: human vs. artificial intelligence or combined?  
*Miodrag Ostojic (Serbia)*

**20:00** Welcome Reception

# PROGRAM

1 JUNE 2019, SATURDAY

07:00-08:30 **ISHNE Council Meeting** Meeting Room 3

07:00-08:30 **JE Editorial Board Meeting** Meeting Room 4

**Telemedicine in cardiology** Meeting Room 1

**Chairmen: Emanuela Locati, Ryszard Piotrowicz**

09:00-09:20 **Telerehabilitation in heart failure patients - TELEREH-HF – multicenter controlled trial**

*Ewa Piotrowicz (Poland)*

09:20-09:40 **Insights from TIMI-HF 2 trial**

*Friedrich Kohler (Germany)*

09:40-10:00 **Hemodynamic telemonitoring in heart failure - AMULET project**

*Pawel Krzesinski (Poland)*

10:00-10:20 **New mobile technologies for arrhythmia detection**

*Philipp Kopylov (Russia)*

10:20-10:40 **Crowdsensing heart care platform: ECG for everybody**

*Stevan Jokic (Serbia)*

**ISHNE ECG University** Meeting Room 2

**Chairmen: Jonathan Steinberg, Sergio Dubner, Adrian Baranchuk**

09:00-09:20 **ECG University V1: milestones, learning curve, successes and failures**

*Jonathan Steinberg (USA)*

09:20-09:40 **ECG University structure: technicalities, website construction, interaction, and examination online**

*Sergio Dubner (Argentina)*

09:40-10:00 **ECG University V2: Funding, structure, topics, presenters and new challenges**

*Adrian Baranchuk (Canada)*

10:00-10:20 **12-lead interpretation of pacemakers/ICDs**

*Yochai Birnbaum (USA)*

10:20-10:40 **Risk stratification in ARVD**

*Pyotr Platonov (Sweden)*



# PROGRAM

**10:40-11:00 Coffee Break**

**Open questions for AF screening and anticoagulation therapy**

**Meeting Room 1**

**Chairmen: Sergio Dubner, Antonio Raviele**

**11:00-11:20 How long should ECG monitoring last for PAF screening?**

*Emanuela Locati (Italy)*

**11:20-11:40 Does prior clinical history (eg post cardiac surgery, cryptogenic stroke,...) affect interpretation?**

*Iwona Cygankiewicz (Poland)*

**11:40-12:00 Anticoagulant therapy- regional differences**

*Sergio Dubner (Argentina)*

**12:00-12:20 What duration of PAF episodes should be considered significant (30 sec? 6 min? 1 hr? 6hrs? 24 hrs?... ) in order to start NAO/TAO?**

*Mina Chung (USA)*

**12:20-12:40 AF screening- available methods**

*Przemyslaw Guzik (Poland)*

**Diagnosis and management of ventricular tachycardia**

**Meeting Room 2**

**Chairmen: Parvin Dorostkar, Pawel Ptaszynski**

**11:00-11:20 Pharmacological treatment of VT**

*Wojciech Zareba (USA)*

**11:20-11:40 ICD programming in reducing unnecessary and inappropriate therapy**

*Valentina Kutiyfa (USA)*

**11:40-12:00 New systems of body surface mapping: The role of Cardiolnsight**

*Ivan Cakulev (USA)*

**12:00-12:20 Current indications for VT ablation**

*Dejan Vukajlovic (Serbia)*

**12:20-12:40 Noninvasive ablation with radiotherapy**

*Marcio Sturmer (Canada)*

# PROGRAM

## Hypertension and metabolic syndrome

Meeting Room 3

Chairmen: Reuven Zichlichman, Miodrag Ostojic

- 11:00-11:20**    **How to differentiate LVH from athlete's heart**  
*Nelson Samesima (Brazil)*
- 11:20-11:40**    **Limitations of surface ECG for the diagnosis of LVH**  
*Ljuba Bacharova (Slovakia)*
- 11:40-12:00**    **Arterial hypertension and atrial fibrillation - the most important risk factors for stroke in clinical practice**  
*Ludovit Gaspar (Slovakia)*
- 12:00-12:20**    **Hypertension or metabolic syndrome as predictor of survival in Serbian cohort of the seven countries study**  
*Biljana Parapid (Serbia), Biljana Obrenović-Kirčanski (Serbia), Miodrag Ostojic (Serbia)*
- 12:20-12:40**    **Blood pressure, arterial aging and arteriosclerosis**  
*Reuven Zimlichman (Israel)*

## 12:40-13:00    ISE General Assembly

Meeting Room 1

## 13:00-14:00    Lunch Break

## 13:45-14:20    Luncheon Session 4: History of Cardioversion and Defibrillation

Meeting Room 1

Chairmen: Niraj Varma, Branislav Milovanovic  
*Ivan Cakulev (USA)*

## How to handle asymptomatic AF detected on monitoring

Meeting Room 1

Chairmen: Bulent Gorenek, Polychronis Dilaveris

- 14:20-14:40**    **BY ECG or holter**  
*Bartosz Szafran (Poland)*
- 14:40-15:00**    **By my watch or patch**  
*Jonathan Steinberg (USA)*
- 15:00-15:20**    **By my ILR**  
*Rod Passman (USA)*
- 15:20-15:40**    **By my pacemaker or ICD**  
*Bulent Gorenek (Turkey)*

# PROGRAM

**Lifestyle/environment as modulators of arrhythmias?**

**Meeting Room 2**

**Chairmen: Ewa Piotrowicz, Mina Chung**

**14:00-14:20 Emotional stress and sudden cardiac death**  
*Sanja Pavlovic (Serbia)*

**14:20-14:40 Obesity and exercise**  
*Mina Chung (USA)*

**14.40-15:00 Mediteran diet**  
*Miguel Fiol (Spain)*

**15:00-15:20 Alcohol**  
*Adrian Baranchuk (Canada)*

**15:30-16:00 Closing Ceremony**

**Meeting Room 1**

# POSTER SESSIONS

## ICE 2019 Poster Sessions

30 May 2019 – Thursday 09:00 – 17:00

31 May 2019 – Friday 09:00 – 18:15

- 42 Tpeak-Tend/QT Ratio Dynamics Depending on the Way in which Action Potentials Duration Changes (Simulation Study)**  
*Natalia Artyeva and Jan Azarov*
- 37 Safety and usefulness of a single dose of oral Flecainide to unmask type 1 Brugada pattern**  
*Hugo armando buhezo arancibia, Nicolas Martinenghi, Gabriel Eidelman, Fernanda Figueroa Ledesma and Sergio Dubner*
- 84 Prediction of Reperfusion Tachyarrhythmias Using Multi- And Single-Lead Tpeak-Tend Intervals**  
*Jan Azarov, Viktorija Galinyte, Natalia Artyeva, Jan Heida, Olesya Bernikova, Peter Kneppo and Ksenia Sedova*
- 94 Comparative Analysis of Machine Learning Techniques in Cardiology**  
*Sladana Jovanović, Branislav Milovanović, Marina Rastović, Milan Jovanović, Dušica Jovanović and Dragana Bajić*
- 34 Arrhythmogenesis in Experimental Ischemia/Reperfusion can be Controlled by Modification of Repolarization Durations in Perfused Regions**  
*Olesya Bernikova, Ksenia Sedova, Marina Vaykshnorayte and Jan Azarov*
- 83 Influence of Body Posture and Breathing Frequency on Fractal Scaling Geometry of Cardiac and Respiration Rhythm in Healthy Subjects**  
*Zoran Matić, Mirjana Platiša, Aleksandar Kalauzi and Tijana Bojić*
- 32 A curious repolarization finding in an infant with complex tuberous sclerosis – Case Report**  
*Mirella Facin, Nelson Samesima, Horacio Pereira Filho, Bruna Madaloso, Nancy Tobias and Carlos Alberto Pastore*
- 68 Pheochromocytoma – an ECG Diagnosis?**  
*Thomas Lindow, Olle Pahlm and Erik Ljungström*
- 95 Twin Atrioventricular Nodes can occur in Patients with Congenital Heart Disease and may not be associated with Heterotaxy.**  
*Parvin Dorostkar*

# POSTER SESSIONS

- 48 Paced-Induced Ventricular Extrasystolia during Normal-High Rate Right Ventricular Pacing**  
*Arturo Martin Penato Molina, Elena de la Cruz Berlanga, Ruben Cano Carrizal, Carlos Casanova Rodriguez, Diego Iglesias del Valle and Ignacio Plaza Perez*
- 45 The prevalence of QRS $\geq$ 110 ms on electrocardiograms in gender groups**  
*Galina Muromtseva, Vladimir G. Vilkov, Vladimir V. Konstantinov, Alexander D. Deev and Svetlana A. Shalnova*
- 78 Antidromic Tachyarrhythmia in patient with Wolff-Parkinson-White syndrome- Case Report**  
*Giovanna Negreiros, Michaela Manfroi, Mariana Carneiro, Sandra Cobra, Roberta Faria, Carla Margalho and Antoinette Blackman*
- 79 Ablation Failure in Wolff-Parkinson-White syndrome with Two Accessory Pathways – Case Report**  
*Michaela Manfroi, Giovanna Negreiros, Mariana Carneiro, Sandra Cobra, Roberta Faria, Carla Margalho and Antoinette Blackman*
- 65 Does non physiological atrium pacing improve the physiological parameters of the heart?**  
*Jakub Mercik, Aleksandra Gajek, Jacek Zawadzki, Jakub Adamowicz, Agnieszka Sławuta and Jacek Gajek*
- 90 Nocturnal Second-degree Atrioventricular Block and Obstructive Sleep Apnea – a Case Report**  
*Katarzyna Matyjas, Izabela Poddebska, Jerzy Krzysztof Wranicz and Iwona Cygankiewicz*
- 88 Cardiac implantable electronic devices and avalanche trancellers**  
*Jerzy Krzysztof Wranicz, Agnieszka Stasiak-Maszke and Izabela Poddebska*
- 91 Cardioneuroablation - the new way of treatment of functional atrioventricular blocks? - a case report**  
*Agnieszka Stasiak-Maszke, Krzysztof Kaczmarek, Pawel Ptaszynski, Jerzy Krzysztof Wranicz and Iwona Cygankiewicz*
- 53 The clinical and electrocardiographic characteristics of parasystolic idioventricular rhythms: results from single-center observational study**  
*Mikhail Chmelevsky, Margarita Budanova and Tatjana Treshkur*
- 46 Electrocardiographic Harbinger for the Recurrence after Catheter Ablation in Patients with Paroxysmal Atrial Fibrillation**  
*Hitomi Yuzawa, Toshio Kinoshita, Ryo Wada, Kensuke Yano, Katsuya Akitsu, Masaya Shinohara, Hideki Koike, Takeya Suzuki, Tadashi Fujino and Takanori Ikeda*

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- 86 Arrhythmias in athletes and their relationship to heart rate.**  
*Izabela Poddebska, Piotr Kosielski, Szymon Galczyński, Jerzy Krzysztof Wranicz, Iwona Cygankiewicz and Krzysztof Kaczmarek*
- 13 Impact of Surgically Induced Weight Loss on Insulin Resistance, Heart Rate Variability and Heart Rate Turbulence Parameters in Patients with Morbid Obesity**  
*Piotr Bienias, Zuzanna Rymarczyk, Justyna Domienik-Karłowicz, Maciej Kosieradzki, Wojciech Lisik, Piotr Sobieraj, Piotr Pruszczyk and Michał Czurzyński*
- 26 Depth of Diving Effects on Cardiac Autonomic Nervous Modulations in Scuba Divers**  
*Marina Rastović, Branislav Milovanović, Ante Obad, Duška Glavaš, Denis Nenadić, Igor Glavičić, Maja Valić and Zoran Valić*
- 44 Incidence of new cases of heart arrhythmia and hypertension in professional drivers of public transport according of remote heart rhythm and arterial blood pressure sampling**  
*Aleksandra Bykova, Maria Chashkina, Abram Syrkin and Philipp Kopylov*
- 6 Abnormal repolarization on electrocardiographic finding in patients with epilepsy**  
*Haruhiko Abe, Katsuhide Hayashi and Ritsuko Kohno*
- 59 Bi- and unipolar pacing – The difference in battery life span**  
*Peter Stephan Wolff, Piotr Stozik, Jacek Marcin Zawadzki, Aleksandra Gajek, Agnieszka Sławuta and Jacek Gajek*
- 38 Factors associated with an increased spatial QRS-T angle in patients with arterial hypertension**  
*Elena Blinova, Tamara Sakhnova, Galina Muromtseva, Eduard Aidu and Vladimir Trunov*
- 69 Electrocardiographic Changes Beyond ST Elevation in the Differentiation of Ischemic and Non-Ischemic ST Elevation in Patients with Chest Pain**  
*Thomas Lindow, Olle Pahlm, Ardavan Khoshnood, Henrik Engblom and Ulf Ekelund*
- 67 Relation of Microvascular Endothelial Function and Heart Rate Variability in Adults: the ELSA-Brasil Cohort Study**  
*Bruno Leonardo Pereira, Luisa C. C. Brant, Sandhi M. Barreto, Jose Geraldo Mill and Antonio Luiz Ribeiro*
- 9 Addressing an Educational Imperative: Response to an Online Website Designed for Teaching ECG Interpretation to Health Professionals**  
*Cynthia Yeung, Jonathan Steinberg, Sergio Dubner and Adrian Baranchuk*

# POSTER SESSIONS

- 54 Diagnostic Accuracy of the Fourth Universal Definition of Myocardial Infarction (MI) in Patients Presenting with Chest Pain**  
*Ama Annor, Mahboob Alam and Yochai Birnbaum*
- 64 Pathophysiology of ST-segment deviation in re-entrant tachycardias - is the reference the primary cause?**  
*Jakub Mercik, Aleksandra Gajek, Jacek Zawadzki, Jakub Adamowicz, Agnieszka Sławuta and Jacek Gajek*
- 12 Assessment of Corrected QT Interval and QT Dispersion as Potential Cardiac Indicators of Disease Severity in Patients with Systemic Lupus Erythematosus**  
*Piotr Bienias, Kamil Oleszek, Anna Chrzanowska, Iwona Dudzik-Niewiadomska, Katarzyna Ciesielska, Bartłomiej Kisiel, Agnieszka Kalińska-Bienias, Monika Lisicka, Joanna Radochońska, Michał Ciurzyński and Piotr Pruszczyk*
- 71 Heart rate and electrocardiographic changes during maxillofacial surgery**  
*Ioana Mozos, Horatiu Urechescu, Cristiana Pricop, Ancuta Banu, Ivana Vekic and Marius Pricop*
- 27 Heart and Kidney Haemodynamic Markers and BMI as Predictors of Resistant Hypertension**  
*Saša Dželebdžić, Branko Beleslin, Marina Rastović and Branislav Milovanović*
- 82 Renin-angiotensin system gene variants in association with vasovagal syncope in Serbian population**  
*Ivan Zivotic, Ivana Kolic, Tamara Djuric, Maja Zivkovic, Branislav Milovanovic and Aleksandra Stankovic*
- 29 A Constant ST-segment Elevation in Leads II, III, AVF: Heritability and Follow-up Results**  
*Egle Kalinauskiene, Jone Vencloviene, Antanas Jankauskas, Inesa Navickaite and Albinas Naudziunas*
- 75 Electrocardiographic and Metabolic Factors Associated With Ageing in People with Neurocardiogenic Syncope – New Possibilities in Estimation of Cardiometabolic Risk**  
*Marina Rastović, Branislav Milovanović, Otto Barak, Dušica Jovanović, Slađana Jovanović, Milan Jovanović and Dragana Bajić*
- 39 Is ECG needed in the qualification of children for amateur sport?**  
*Bartosz Szafran*
- 14 Right-sided Electrocardiogram Is Not Helpful in the Diagnosis and Risk Assessment with Acute Pulmonary Embolism – Preliminary Results**  
*Piotr Bienias, Joanna Radochońska, Monika Lisicka, Michał Konwerski, Kamil Oleszek, Michał Ciurzyński and Piotr Pruszczyk*
- 7 Eligibility And Disqualification of Competitive Athletes With Aortic Diseases - Holistic Approach.**  
*Marija Andjelkovic, Milica Vukasinovic Vesic, Nenad Dikic and Ivana Nedeljkovic*
- 49 Links between vitamin D, C reactive protein, LDL, oxidized LDL and ECG variables**  
*Ioana Mozos and Daniela Jianu*

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# CONTRIBUTERS





# LUNCH SYMPOSIUMS

30 MAY 2019, THURSDAY

**Luncheon Session 1 Abbott: CRT fails in a third of my patients - accept or intervene?**  
Chairmen: Niraj Varma, Goran Milasinovic

Meeting Room 1

12:40-12:55 **The paced QRS- does it predict NRs?**  
*Marek Jastrzebski (Poland)*

12:55-13:10 **MPP to improve LV activation**  
*Niraj Varma (USA)*

13:10-13:25 **Dynamic pacing to improve CRT response**  
*Brian Wisnoskey (USA)*



31 MAY 2019, FRIDAY

**Luncheon Session 2 Medtronic:  
Advantages and disadvantages  
of automatic diagnostics with implantable devices**  
Chairmen: Goran Milasinovic

Meeting Room 1

13:10-13:30 **Advantages and disadvantages of automatic diagnostics with implantable devices**  
*Bozidar Ferek Petric (Croatia)*

13:30-13:50 **Automatic diagnostics of hemodynamic parameters in CRT devices**  
*Goran Milasinovic (Serbia)*

13:50-14:10 **Prolonged automatic monitoring of heart rhythm in the light of new recommendations**  
*Dragan Kovacevic (Serbia)*



1 JUNE 2019, SATURDAY

13:10-13:45 **Luncheon Session 3 PMI: Cardiovascular Effects of the Tobacco Heating System (THS) 2.2 Compared with Continued Smoking**

Meeting Room 1



# NOTES



**Organizing Secretariat**

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