CinC2025
São Paulo

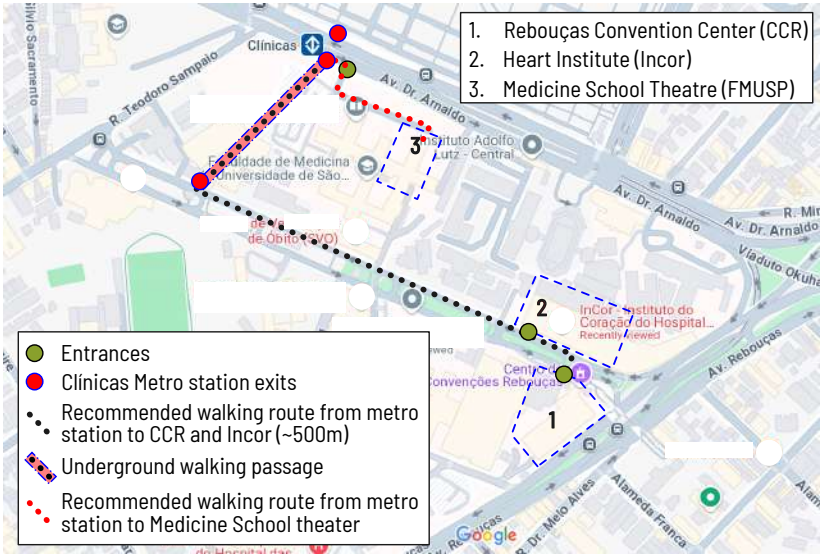
52nd International Computing in Cardiology Conference

São Paulo, Brazil
September 14-17, 2025

UFABC

Reaching the venues - Quick map

Cinc 2025 will be at Centro de Eventos Rebouças and surrounding buildings.



1. **Rebouças Convention Center (CCR):** The main venue is here.

   Address: Avenida Rebouças, 600. The entrance is on Avenida Doutor Eneas de Carvalho Aguiar

   https://convencoesreboucas.com.br/ccr/portal/

2. **Heart Institute (InCor):** Will host the Physionet Challenge and Hackathon and MathWorks Workshop. **Check important information about Incor in the next page.**

   Address: Avenida Doutor Eneas de Carvalho Aguiar, 44.

   https://www2.incor.usp.br/sites/incor2024/en

3. **Medicine School Theatre (FMUSP):** Will host the Sunday Symposium.

   Address: Avenida Doutor Arnaldo, 455.

   https://www3.fm.usp.br/en/portal/

For those taking the metro to CCR or Incor: Hop off the train at Clinicas station (Green line). Go past the station turnstiles, turn right and go all the way through the tunnel. This tunnel will take you to the closest exit to the venues. When you reach the street, turn left and walk about 500m. It will take you about 5 minutes walking to reach the venues.

For those taking the metro to FMUSP: Hop off the train at Clinicas station (Green line). Go past the station turnstiles, turn right and take the first exit on your left. You will be in front of FMUSP.

Other methods: See page 40 for alternative methods to reach the venues.

Important

All Physionet Challenge and Hackathon, and MathWorks Workshop participants will need to identify themselves at the security check at the entrance of the Incor building. For that bring with you your Passport (foreigners) or RG/RNE (Brazilians or foreigners living in Brazil).

Program overview

Sunday, Sep 14th

09:00 - 11:00	MathWorks Workshop	InCor
11:00 - 11:30	Coffee Break	InCor
11:30 - 17:00	PhysioNet Challenge Hackathon	InCor
09:00 - 12:00	BoD Future Site Meeting	CCR
09:00 - 18:00	Registration	CCR
14:00 - 18:15	Sunday Symposium	FMUSP Theatre
18:30 - 22:30	Happy Hour	CCR

Monday, Sep 15th

08:30 - 09:00	Welcome to CinC 2025	CCR
09:00 - 10:30	YIA First Finalists	CCR
10:30 - 11:00	Coffee break	CCR
11:00 - 12:30	Oral sessions	CCR
12:30 - 18:00	Social event with lunch	Caminhos do mar park
18:00 - 23:00	Gala Dinner at Mirante Restaurant	Mirante Restaurant

Tuesday, Sep 16th

08:30 - 10:00	Oral sessions	CCR
10:00 - 10:30	Coffee Break	CCR
10:30 - 12:00	Oral sessions	CCR
12:00 - 13:00	Lunch	CCR
12:05 - 12:20	Custo Med GmdH Presentation	CCR
12:20 - 12:55	Beyond Academia: Careers paths	CCR
13:00 - 14:30	Oral sessions	CCR
14:30 - 14:45	Break	
14:45 - 16:15	Oral sessions	CCR
16:15 - 16:45	Coffee Break	CCR
16:15 - 17:45	Poster Sessions	CCR
18:00 - 19:30	MASP Museum Visitation	MASP museum
19:30 - 00:00	Happy hour	Boteco Boa Praça

Wednesday, Sep 17th

08:30 - 10:00	Oral sessions	CCR
10:00 - 10:30	Coffee Break	CCR
10:30 - 12:00	Oral sessions	CCR
12:00 - 12:30	Lunch	CCR
12:30 - 14:00	Poster Sessions	CCR
14:00 - 15:00	YIA semifinalists	CCR
14:00 - 15:00	Oral sessions	CCR
15:00 - 16:30	Closing Plenary	CCR
16:00 - 17:00	Awards and closing remarks	CCR

Contents

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Welcome to São Paulo!

It is with immense enthusiasm and joy that we welcome you to the 2025 Computing in Cardiology Conference in São Paulo, Brazil – the very first time in its 52-year history that this prestigious event will be held in Latin America! Cinc 2025.

This marks not only a historic milestone for CinC but also a remarkable opportunity for participants to discover the vibrant, diverse, and breathtakingly beautiful country of Brazil – one of Latin America's most sought-after destinations. From the lush Amazon rainforest and the vast wetlands of the Pantanal to the rugged beauty of the Caatinga and the lush Atlantic Forest, Brazil is home to an unparalleled variety of natural wonders, many of them recognized by UNESCO as World Natural Heritage sites. Each region offers a unique and unforgettable experience, rich with culture, color, and biodiversity.

Unlike its Spanish–speaking neighbors, Brazil's primary language is Portuguese, a reflection of its distinct colonial history. This linguistic and cultural uniqueness is part of what makes Brazil such a captivating place to explore.

Our host city, São Paulo, is the beating heart of Brazilian innovation and diversity. As the capital of the country's most economically powerful state, it boasts Latin America's largest urban economy and is home to some of the top universities and research institutions in the region.

Beyond its academic prowess, São Paulo is a city that never sleeps and always surprises. Its world-renowned nightlife, rich multicultural heritage, and dynamic arts scene make it a true global metropolis. From street markets to Michelin-starred restaurants, and from historic landmarks to modern architectural marvels, there's always something new to discover. With residents from over 70 nationalities, São Paulo is a cultural mosaic, offering authentic experiences and warm hospitality at every corner.

The conference will be held at the Rebouças Convention Center, just a 10-minute walk from the iconic Paulista Avenue — the city's symbolic artery of commerce, culture, and life. With nearby hotels for every budget, this location is ideal for both professional engagement and leisurely exploration. Cinc 2025 will begin with our signature Sunday Symposium, this year themed: *The role of technology to characterize,*

monitor, and overcome heart abnormalities: A panoramic multiscale view.

This exciting event is being organized by a passionate and dedicated team from leading Brazilian institutions: the Federal University of ABC, Instituto do Coração, University of Mogi das Cruzes, Federal University of Rio de Janeiro, and Federal University of Juiz de Fora.

We truly cannot wait to welcome you to Brazil — a land of warmth, wonder, and world-class science. Join us for a historic moment, where groundbreaking cardiovascular research meets Brazilian hospitality in the unforgettable setting of São Paulo.

With warmest regards,

The Cinc 2025 Local Organizing Committee (in alphabetical order).

Welcome from the President

P, Q, R, S, T waves. We all know the significance of these pivotal ECG waves. But how many of us know the fabulous LP Wave by Antônio Carlos Jobim, one of Brazil's greatest composers, singers, and musicians?

As you can see, I didn't wait for the 2025 CinC edition in São Paulo to be inspired by the Wave, in any sense of the word. When I decided to hang that album poster in my kitchen, I was already a fan of this music, filled with madrugada and coração (terms not so far from the spirit of CinC), but long before the São Paulo project was even imagined.

The year 1967 marked both the release of Wave and a major milestone in cardiac electrophysiology: the first analysis of arrhythmia origin and mechanisms in the human heart using programmed electrical stimulation combined with intracardiac activation mapping. Cardiac engineering was already making waves too. I wouldn't say the planets were perfectly aligned but let's admit it: a shared enthusiasm and momentum in both science and innovation seemed to echo across time. It's this same spirit that motivated a passionate Local Organizing Committee (LOC) to bid for CinC in Brazil.

And now, for the first time in 51 uninterrupted years, South America will host Computing in Cardiology. It's a unique opportunity to broaden the reach of CinC across the world and to exhibit the creativity, skill, and innovation that Brazil has to offer. As you'll see, the Local Organizing Committee hasn't held back when it comes to creativity: the Sunday Symposium, memorable social events, stunning venues, local food and drinks, and even the Innovate Together: Science Collaboration Summit on Friday. You know that CinC conferences are renowned for fostering strong social connections and delivering high-level, ethically grounded scientific outcomes.

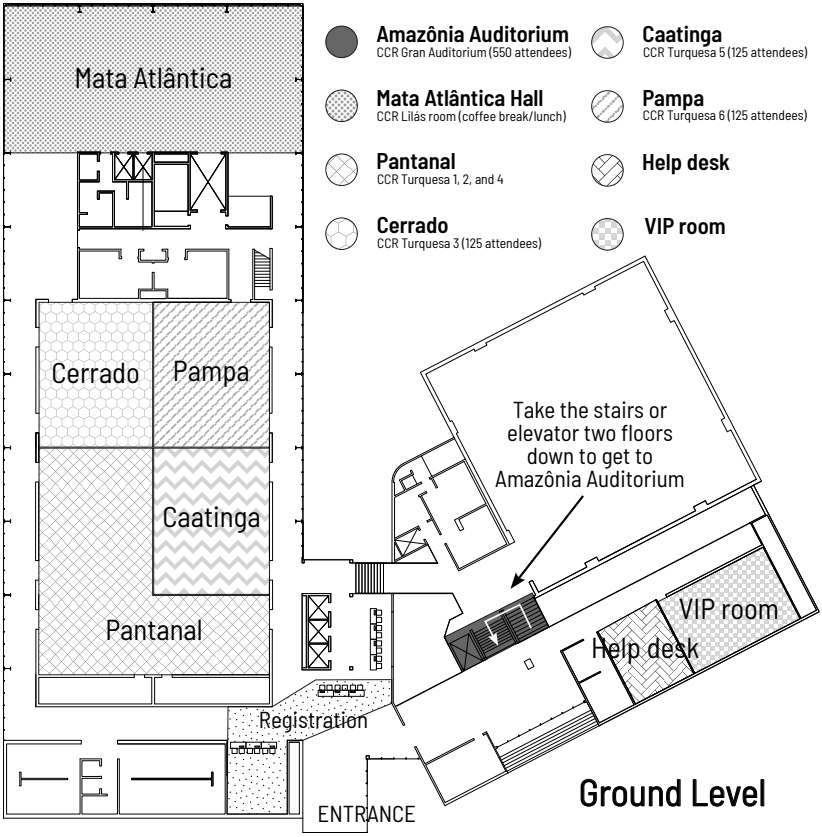
In times like these, that combination is more valuable than ever, and all the ingredients are there to make it a success. Referring to Rob's message from last year, I hope the torch he passed on to me is still burning bright. But while the success of a conference does rely heavily on the LOC and the CinC Board, by the time you read this message, you, the attendees, will be the ones bringing this Brazilian edition to life, making it vibrant, full of scientific exchange, and above all, friendly.

O. Meste

Conferece Venue Maps

Rebouças Convention Center (CCR)

Address: Avenida Rebouças, 600. The entrance is on Avenida Doutor Eneas de Carvalho Aguiar (see our quick map on page 2).



The opening and closing ceremonies and the presentation of the short-list for the Rosanna Degani Young Investigation Award will be in the Amazônia Auditorium, with capacity of up to 555 attendees.

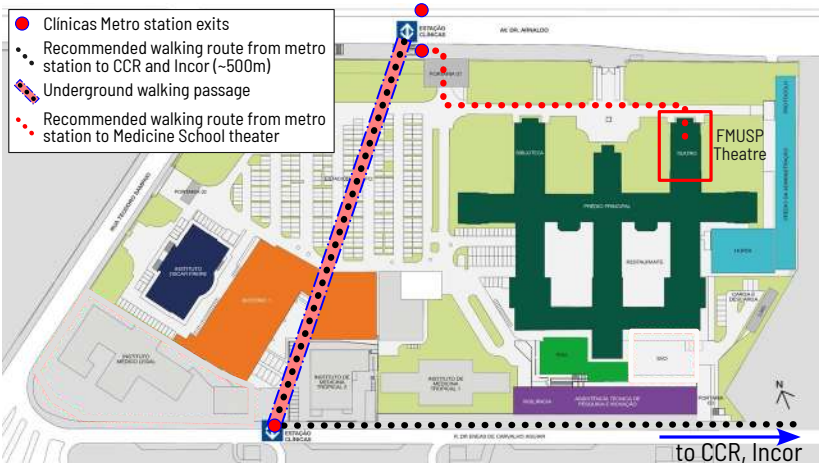
Four parallel sessions will be placed in the Cerrado, Pampa, and Caatinga room with capacity of 125 attendees each, and Amazônia with capacity of 555 attendees

The poster session will take place in the Pantanal room.

Coffee breaks and lunch will be held in the Mata Atlântica Hall.

Medicine School Theatre (FMUSP)

Address: Avenida Doutor Arnaldo, 455.



13th September (Saturday) Activities

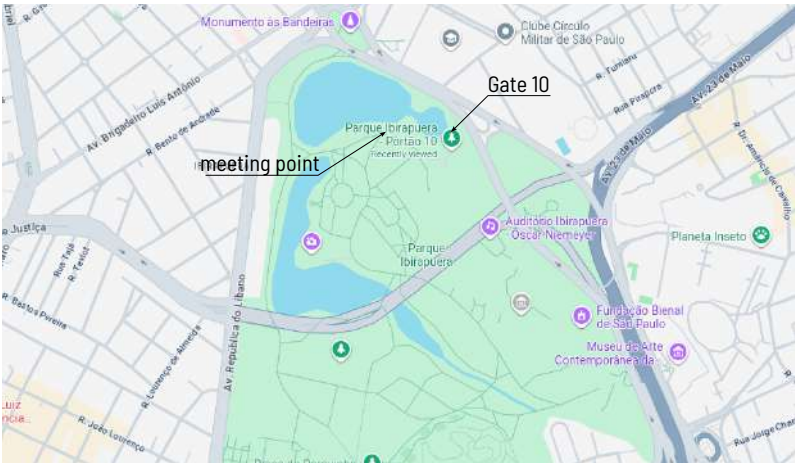
Integrative Social Reception

Local: Ibirapuera Park

Time: 14:00 to 17:00

Address: Avenida Pedro Álvares Cabral, s/n.

Information for the participants: We will meet near the water fountains, near entrance gate 10 (see map below). The entrance is free. You can take a taxi or rideshare services like '99' or 'Uber' apps to reach the place.



On Saturday 13th, before the conference, an integrative social reception will be held at Ibirapuera Park in São Paulo.

Ibirapuera Park is one of São Paulo's most iconic landmarks and one of the most important urban parks in Latin America. Inaugurated in 1954 to celebrate the city's 400th anniversary, the park blends nature, culture, sports, and leisure, making it a must-visit destination.

Top Attractions in Ibirapuera Park

Oca and Cultural Pavilions: The park houses key cultural venues, including the Oca, the Afro Brazil Museum, the Japanese Pavilion, and

the MAM (Museum of Modern Art). These spaces host art exhibitions, historical displays, and cultural events, perfect for those seeking inspiration.

Ibirapuera Auditorium: Designed by Oscar Niemeyer, this auditorium is a masterpiece of modern Brazilian architecture. With its striking red canopy and diverse programming, it hosts concerts, orchestras, and cultural performances.

Monument to the Bandeiras: This grand sculpture by Victor Brecheret pays tribute to the bandeirantes, the explorers who expanded Brazil's territory.

Lakes and Walking Trails: The park features scenic lakes where visitors can rent paddle boats or simply enjoy the view. The tree-lined trails are ideal for jogging, walking, or peaceful relaxation.

Sculpture Garden: An open-air exhibit showcasing works by renowned artists like Tomie Ohtake and Emanoel Araújo, blending art and nature beautifully.

Sports and Leisure Activities: With sports courts, cycling paths, yoga areas, and picnic spots, Ibirapuera is perfect for both active visitors and those looking to unwind outdoors.

Planetarium's Stellar Views: The Aristóteles Orsini Planetarium offers astronomy sessions and sky projections, providing an educational and mesmerizing experience.

Ibirapuera Park is more than just greenery, it is a symbol of São Paulo that combines culture, history, and nature. Whether you are looking for a relaxing stroll, outdoor sports, or artistic inspiration, the park offers unforgettable experiences for everyone.

14th September (Sunday) Activities

MathWorks Workshop

Local: Heart institute (Incor), classrooms 2 and 3 - 2nd Floor - Block I

Time: 09:00 to 11:00

Address: Avenida Doutor Eneas de Carvalho Aguiar, 44. Check our quick map on page 2 on how to reach the place.

Hardware and Software Requirements: To participate in the workshop, you will need a laptop, Google Chrome browser, and a MathWorks account. Do not forget to bring your power supply adapter if needed.

You will be provided with a temporary MATLAB workshop license that grants access to all products used in the workshop, as well as the necessary exercise files.

Information for the participants: Please arrive 1 hour earlier to get your Cinc 2025 kit at CCR and go through security check to enter.

Important

All Physionet Challenge and Hackathon, and MathWorks Workshop participants will need to identify themselves at the security check at the entrance of the Incor building. For that bring with you your Passport (foreigners) or RG/RNE (Brazilians or foreigners living in Brazil).

Join us for an engaging MathWorks workshop and Gain valuable insights and hands-on experience.

Title: In Silico Medicine: Building and Leveraging High-Fidelity Human Models for Medical Device Development

Presenters: Pourash Patel and Akhilesh Mishra

In Silico medicine leverages computational models and simulations to revolutionize the development of medical devices and pharmaceuti-

cals. These powerful simulation models are designed to accurately replicate the complex anatomy, physiology, and biological processes of the human body.

In this hands-on workshop, you will gain practical experience in this cutting-edge field. We will teach you step-by-step how to build a high-fidelity electrophysiology heart model, a functional physiological model critical for cardiac device development. You will then learn how to simulate and analyze these sophisticated models, understanding their role as vital testbeds for medical device design, verification, and validation.

Highlights:

- Build and refine high-fidelity simulation models of human physiological systems, with a specific focus on cardiac electrophysiology.
- Learn the hybrid automata approach for modeling differential equations with state machines to represent conduction pathways and cardiac cells.
- Learn to parameterize models for simulating a variety of diseased states – e.g., generate EGMs and ECGs by simulating regional ischemia.
- Explore real-time device validation using Hardware-In-the-Loop (HIL) techniques with human simulation models, significantly lowering the burden of traditional clinical trials.
- Understand FDA certification guidelines pertinent to In Silico models.

PhysioNet Challenge Hackathon

Local: Heart institute (Incor), classrooms 2 and 3 - 2nd Floor - Block I

Time: 11:30 to 17:00

Address: Avenida Doutor Eneas de Carvalho Aguiar, 44. Check our quick map on page 2 on how to reach the place.

Information for the participants: Please arrive 1 hour earlier to get your Cinc 2025 kit at CCR and go through security check to enter.

Important

All Physionet Challenge and Hackathon, and MathWorks Workshop participants will need to identify themselves at the security check at the entrance of the Incor building. For that bring with you your Passport (foreigners) or RG/RNE (Brazilians or foreigners living in Brazil).

The Physionet Challenge Hackathon will be held in the Heart Institute (InCor), officially established in 1963. InCor is one of the world's three largest centers for cardiology in terms of service volume and number of specialties. It is also the largest center for cardiology science in Latin America. We highlight a few numbers for 2024: 5,7003 surgery procedures, 12,400 hospital admissions, 13,900 hemodynamic studies, 248,000 appointments, and 3,780,000 diagnostic exams performed.

The 2025 Challenge invites teams to develop algorithms for using electrocardiograms (ECGs) to identify cases of Chagas disease.

Chagas disease is a parasitic disease primarily transmitted by triatomine insect bites. It affects an estimated 6.5 million people and causes nearly 10,000 deaths annually, primarily in Central and South Americas. Serological testing can detect Chagas disease and allow treatment to slow or prevent damage to the cardiovascular system, but testing capacity is limited. Chagas disease symptoms may also appear in ECGs, so automated approaches can help to prioritize individuals for the limited numbers of serological tests and inform the impacts of and treatments for Chagas disease. As in previous years, the Challenge is divided into two phases: an unofficial phase and an official phase.

Sunday Symposium

Local: Theater of the Medicine School (FMUSP)

Time: 14:00 to 18:15

Address: Avenida Doutor Arnaldo, 455. Check our quick map on page 2 on how to reach the place.

Information for the participants: Please arrive 1 hour earlier to get your Cinc 2025 kit at CCR and go through security check to enter the theather.

The Sunday Symposium will be held at the recently refurbished Theater of the Medicine School of São Paulo University (FMUSP), founded in 1912 and established in 1913. In 1931, the current building of the medical school was formally opened. The welcome reception afterwards will be at the Rebouças Convention Center.

The role of technology to characterize, monitor, and overcome heart abnormalities: A panoramic multi-scale view

Part I:	
14:00	*I. The natural history of Chagas disease* Profa. Dra. Ester Sabino, USP
14:45	*II. Improving access to cardiovascular care for people in Brazil using telehealth* Prof. Dr. Antonio Luiz Pinho Ribeiro, UFMG
15:30	Coffee-Break
Part II:	
16:00	*I. From myocardithis to arrhythmia: Assessing risk with computational models* Prof. Dr. Rodrigo Weber, UFJF
16:45	*II. Precision Medicine in Cardiology* Prof. Dr. José Eduado Krieger, USP
Part III:	
17:30	Round Table
18:30	Welcome Reception at Rebouças Convention Center (5 min walking from the Sunday Symposium location)

Welcome Reception

Local: Rebouças Convention Center (CCR)

Time: 18:30 to 22:30

Address: Avenida Rebouças, 600. The entrance is on Avenida Doutor Eneas de Carvalho Aguiar (see our quick map on page 2).

After the Sunday Symposium, a welcome reception will be carried out at Rebouças Convention Center (CCR), with traditional Brazilian Music with the performance of “Nó na Pedra” (@nonapedra).

After the reception you can take a taxi or rideshare service back to your accommodation, like ’99’ or ’Uber’ apps.

15th September (Monday) Activities

Caminhos do Mar social activities

Local: Caminhos do Mar Park

Time: 13:00 to 17:30

Address: Estrada Caminho do Mar (SP 148), Km 42, São Bernardo do Campo.

Information for the participants: The visit will start right after the 11:00–12:30 parallel sessions. Be on time by the parallel session rooms to grab your lunch and find your group. Buses will take all participants to the visit.

The organizing commitee is delighted to have you join us for a special day in the heart of nature! Our social activities will take place at Caminhos do Mar park. We have the opportunity to connect with each other and the environment, enjoying moments of relaxation, fun, and shared experiences.

Get ready for an unforgettable outdoor experience, filled with activities, great company, and the beauty of the natural surroundings. We hope this event will not only be a gathering but also a cherished memory for everyone!

About the park

Caminhos do Mar is located in the Serra do Mar State Park, a conservation unit created to ensure full protection of the biological heritage of the Atlantic Forest (Mata Atlântica), while also offering services that encourage environmental education and the integration of people with

nature. In addition to its natural wealth, the park has an important cultural and historical heritage with its monuments erected in 1922 in honor of the centenary of Brazil's Independence.

Caminhos do Mar provides its visitors with a unique and unforgettable experience amidst the lush nature of the Atlantic Forest and places full of historical significance, spectacular views and physical, recreational and educational activities.

The Caminho do Mar Road cuts through the Serra do Mar (Mountain Range) and is 8 kilometers long between São Bernardo do Campo and Cubatão. It was the first concrete-paved access road in Latin America, and connected São Paulo to the coast until the inauguration of the Anchieta Highway in 1947, when it became a secondary route and was renamed Old Santos Road.

Before this, the only option for transporting goods from the interior to the port of Santos was Calçada do Lorena, a 3.5 kilometers long stone-paved trail built in 1792 and where Prince Regent D. Pedro I climbed the mountain towards São Paulo to proclaim Brazil's Independence on September 7, 1822. Both trails are in the park and can be visited.

In 1922, to commemorate the 100th anniversary of Brazil's Independence, 8 monuments were built by the French architect Victor Dubugras along the Old Santos Road, which can now be explored on foot as part of Caminhos do Mar: Monumento ao Pico, Pontilhão Raiz da Serra, Belvedere Circular, Cruzeiro Quinhentista, Padrão do Lorena, Rancho da Maioridade, Ruínas e Pouso Paranapiacaba. Each one tells a story and provides unforgettable experiences surrounded by the nature of Serra do Mar. In the 1970s, they were listed by CONDEPHAAT – the Council for the Defense of Historical, Archaeological, Artistic and Tourist Heritage of the State of São Paulo.

Atlantic Forest (Mata Atlântica)

The Atlantic Forest is one of the richest forests in terms of species diversity on the planet. The biome covers an area of approximately 15% of the Brazilian territory along the coast, which stretches from Rio Grande do Norte to Rio Grande do Sul states, including 17 states.

It is the second largest forest in Brazil, consisting of plateaus and mountain ranges, and has hundreds of endemic animal and plant species, that is, species that are only found there. Unfortunately, the Atlantic Forest has suffered deforestation and urbanization due to human activity over the centuries, but today there are laws that preserve large reserves such as the Serra do Mar, where Caminhos do Mar is located.



The Atlantic Forest is believed to have around 20,000 plant species (around 35% of those found in Brazil), 849 bird species, 370 amphibian species, 200 reptile species, 270 mammal species and around 350 fish species. In Brazil, it is home to 383 of the 633 endangered animals, including the Golden Lion Tamarin.

The main animal species found in Caminhos do Mar are: Sloth, Anteater, Coati, Cipó Snake, Caninana Snake, Jararaca Snake, Wild Dog, Capuchin Monkey, Tapir, and Wild Deer. Birds include the Green-billed Toucan, Thrush, Macaw Parakeet, Caracara, Graúna, Surucuá, among others. The main plant species found in the park are: Embaúba, Manacá da Serra, Araçás, Bromeliads (including the Imperial), Orchids, Jussara, Pupunha and Jerivá Palms, Ipês Ferns, Aroeiras, Guatam-

bus, among others.

For more information about the park, please check the website https://caminhosdomar.com.br/

Social Activities

We created many activities for the participants in the park. They are split into PASSIVISTS, MODERATES, and ACTIVISTS groups. Check the information about your group.

Passivist Group

The tour of Caminhos do Mar Park begins at the 'Pouso de Paranapiacaba' cafeteria, with a panoramic view of the Serra do Mar. Next, you will visit the historic Guest House, passing by the Nautical Base. At Curva do Uau, a symbolic planting of native seedlings will take place. After a photo stop at the Padrão Lorena landmark, the route continues to Cubatão, ending at the charming Rancho da Maioridade, where the group will meet the others for greater integration. Passivists will have a motorized van at their disposal for moving in the park.

Recommendations for the group: Comfortable clothing, walking shoes, insect repelent, sun protection, water.

Moderate Group

Brazilian cultural experience — Workshops on typical Brazilian cultural activities. The group goes directly by van to Rancho da Maioridade, surrounded by nature of the Serra do Mar. The activities promote integration, artistic expression (gestures and movements), and appreciation of the national culture, fostering knowledge of the local culture, instruments, and integrating the participants. Workshops: Capoeira, Maracatu, and Afro-Brazilian dances

Recommendations for the group: Comfortable clothing, walking shoes, insect repelent, sun protection, water.

Activist Group

There are several subgroups in this category (A to E). Check the information for the subgroups you selected in the registration form.

A) Walk on the old Santos Road to the Rancho da Maioridade

The group begins the tour with a walk along the historic Estrada Velha de Santos to the charming Rancho da Maioridade, where the group will meet the other groups. The descent along the road offers beautiful mountain views. The tour combines history, nature and fun. The route passes by the Padrão Lorena landmark, where a brief stop is made for photos. For the more adventurous, there is the option of going down a short stretch in carrinhos de rolemã.

Recommendations for the group: Comfortable athletic clothing, walking shoes, insect repelent, sun protection, water.

B) Walk on the Calçada Lorena path to the Rancho da Maioridade

The group begins the adventure along the historic Calçada do Lorena trail, with original stone paving. The trail winds through the Atlantic Forest, offering direct contact with nature. Along the way, it is possible to observe the region's rich fauna and flora. The descent reveals lush landscapes and a lot of preserved history. The trail ends near Padrão Lorena, an important landmark on Caminhos do Mar.

Recommendations for the group: Comfortable hiking clothing, hiking shoes, insect repelent, sun protection, water.

C) Zipline

The group begins the descent of Santos Road on a zipline between the mountains (500m-zipline 100m high across the mountains). The activity offers a unique view of the mountains and a lot of adrenaline. The group ends the descent with a walk along the Estrada Velha de Santos, surrounded by the lush Atlantic Forest. During the journey, the group can enjoy the history and nature of Caminhos do Mar, until the charming Rancho da Maioridade, where the group will meet the other groups.

Recommendations for the group: Comfortable athletic clothing, walking shoes, insect repelent, sun protection, water.

D) Kayaking

The group begins the tour with a kayaking experience at the Nautical Base, paddling through nature. After the activity, there is the option of

going down a short stretch in carrinhos de rolemã. Then, they continue a walk along the historic Estrada Velha de Santos to the charming Rancho da Maioridade, where the group will meet the others. The route reveals stunning landscapes and historic buildings. During the journey, there are breaks for contemplation and photos. The tour combines aquatic adventure and immersion in the history of Caminhos do Mar.

Recommendations for the group: Comfortable athletic clothing, walking shoes, insect repelent, sun protection, water, towel, and extra clothes in case you fall in the water.

E) Cycling on the Old Santos Road

The group will ride bikes along the Estrada Velha de Santos, cycling between nature and historical landmarks. The descent offers exciting stretches and incredible views of the Serra do Mar. At the end of the route, the group boards vans for the return trip. The destination is Rancho da Maioridade, a meeting point for the other participants. The tour combines sports, scenery and integration.

Recommendations for the group: Comfortable athletic clothing, shoes for cycling, insect repelent, sun protection, water.

Dinner at Mirante Restaurant

Local: Mirante Restaurant[a]

Time: 18:00 to 23:00

Address: Estrada Caminho do Mar (SP 148), Km 34, São Bernardo do Campo.

Information for the participants: Our buses will take all participants from the park to the restaurant. After the dinner, our buses will take all participants back to the hotels.

[a] https://miranterestaurante.com.br/

On monday, the Gala Dinner will be at a restaurant near to the Caminhos do Mar National Park, located at Atlantic Forest. Join us for a relaxed and cozy dinner during the conference! We'll be gathering to unwind, connect, and enjoy delicious Brazilian food together. Our buses will take all participants from the park to the restaurant.

We chose a spot that serves traditional Brazilian cuisine so you can experience a bit of our local flavors. **There is no dress code**, come as you are, whether that is jeans, sneakers, or conference wear. The focus is on great company and conversation. We hope to see you there!

We chose a spot that serves traditional Brazilian cuisine so you can experience a bit of our local flavors. There is no dress code, come as you are, whether that is jeans, sneakers, or conference wear. There are toilets and a few showers in the park you can use and get changed. The focus is on great company and conversation. We hope to see you there!



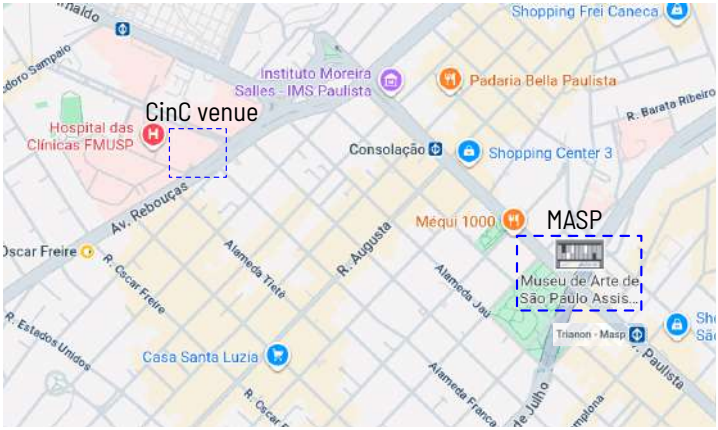
16th September (Tuesday) Activities

The Museu de Arte de São Paulo (MASP)

Local: Museu de Arte de São Paulo (MASP)

Time: 18:00 to 19:30

Address: Avenida Paulista, 1578.



Information for the participants: MASP tickets will be provided to all conference participants. There is no need to buy tickets for yourself.

You can reach MASP by public transportation or taxi. The nearest metro station is Trianon-Masp (Line 2 - Green), which is just a few minutes' walk from the museum.

On Tuesday, after the Poster Sessions, the participants are invited to visit the MASP (The Museu de Arte de São Paulo).

The Museu de Arte de São Paulo (MASP) is a private not-for-profit museum founded in 1947 by business mogul and patron of the arts Assis Chateaubriand (1892–1968), becoming the first modern museum in the country. Chateaubriand invited Italian art dealer and critic Pietro Maria Bardi (1900–1999) to direct MASP, and Lina Bo Bardi (1914–1992) to conceive the architecture and the exhibition design.

With the most important collection of European art in the southern hemisphere, MASP's holdings currently consist of more than 11 thousand artworks, including paintings, sculptures, objects, photographs, videos and pieces of clothing from various periods, from Europe, Africa, Asia and the Americas.

Initially located on the street 7 de Abril, in downtown São Paulo, in 1968 the museum was transferred to its current location on Avenida Paulista, in the iconic building designed by Lina Bo Bardi, which has become a landmark in the history of 20th-century architecture. Making use of glass and concrete, in her architecture Lina Bo Bardi put rough, unfinished surfaces into harmony with aspects of lightness, transparency and suspension. The ground-level plaza under the building's immense free span was designed as a multipurpose public square.

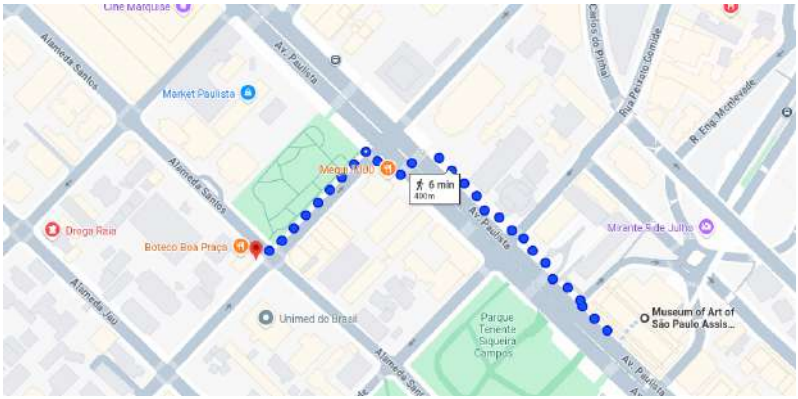
The architect's radicality is also present in the glass display easels created to show the collection on the building's second floor. By taking the artworks off the walls, the display easels question the traditional model of the European museum, in which the spectator is led to follow a linear narrative suggested by the order and arrangement of the artworks in the rooms. In MASP's spacious picture gallery, the suspended and transparent exhibition design allows the public to engage in a closer relationship with the collection since the visitor can choose his or her own path among the artworks, move around them and see their backs.

Happy hour at Boteco Boa Praça

Local: Boteco Boa Praça[a]

Time: 19:30 to 00:00

Address: Alameda Santos, 1873.



[a] https://botecoboapraca.com.br/

After the MASP visit, a happy hour will be carried out at Boteco Boa Praça. The place is at a walking distance from MASP (6min). Check the map below.

Each attendee from Cinc 2025 will be able to choose one drink and one starter once arrive in the place.

Drink options:

- Caipirinha (one unity)
- Brahma Chopp (two units)
- Water, natural juice or soft drink (two units)

Starters:

- Tapioca Pillow with Dried Meat
- Catupiry Coxinha
- Shrimp Pastry

- Fried cassava
- Calabresa sausage with onions

The Science Collaboration Summit

Local: Inova USP

Time: September 19th, 08:00 to 13:00

Address: Avenida Professor Lúcio Martins Rodrigues, 370.

Information for the participants: You can take a taxi or rideshare services like '99' or 'Uber' apps to reach the place.

In this year, the local committee of the Computing in Cardiology 2025 in partnership with the International Society of Computing in Cardiology is organizing the **"Innovate Together: The Science Collaboration Summit"** event **on September 19th, 2025**, to be held in the Innovation Center[1] of University of São Paulo (Inova USP), with the aim of promoting scientific collaborations between researchers from different parts of the world.

Scientific collaboration is essential for advancing knowledge and solving complex problems. When researchers from different fields, institutions, and countries work together, they bring together diverse skills, resources, and perspectives, creating opportunities for discoveries that would be difficult to achieve individually.

[1] https://inova.usp.br/

This collective approach makes it possible to address global challenges, such as heart disease, thus contributing to the development, improvement and optimization of processes and techniques applied to cardiology, helping to improve accurate diagnoses and treatments, with positive consequences on the quality of life of patients. In addition, collaborations can boost technological innovations, promote cultural exchange, and strengthen support networks among scientists, stimulating creativity and mutual learning.

The event will consist of 5-minute pitches where people present their research and possibilities for collaboration, and afterwards, we will have one-to-one meetings, where researchers will be able to talk to each other. The event is open, with no registration cost, but with limitations on the number of places.

Programme

8:00 – 11:30	5-minute pitches (Inova USP)
11:30 – 13:00	Coffee break (Inova USP)
11:30 – 13:00	One-to-one meetings (Inova USP)
13:30 – 16:30	Visiting Butantan Institute

Visiting Butantan Institute

Local: Butantan Institute

Time: September 19th, 13:30 to 16:30

Address: Avenida Vital Brasil, 1500.

Participants will go walking from Inova USP to Butantan Institute, enjoying the University buildings and nature.

Participants will be able to visit the Instituto Butantan[1], a globally recognized scientific center for biomedical research and public health advancements. Visitors will visit featuring museums, a serpentarium, and other attractions that promote awareness about science and health. Established in 1901, it has played a pivotal role in producing vaccines, antivenoms, and immunobiologicals that are essential for combating diseases and venomous animal bites. The institute is renowned for its contributions to public health, including the development of vaccines for diseases like heart failure (Captopril/Capoten), rabies, hepatitis, and tetanus. It also houses a unique collection of venomous animals, such as snakes and spiders, which are studied to create life-saving antivenoms. Additionally, Butantan collaborates with international organizations like the World Health Organization (WHO) and the Pan American Health Organization (PAHO) to improve global health.

[1] https://en.butantan.gov.br/

Conference Information

Please wear your badge at all times. It is both your ticket to access the conference (meals, dinner, reception, etc.)

Code of Conduct

All participants in CinC events must behave professionally, ethically, and responsibly in all interactions with other CinC participants, e.g., at all CinC conferences, in formal or informal social activities, within related online communities, and on social media. All individuals participating in CinC activities must comply with the following standards of conduct. All participants at CinC events are expected to:

- Exercise consideration and respect for others in their speech and actions; listen to and respect other points of view.
- Refrain from speech or actions that are demeaning, discriminatory, or harassing. Any form of harassment, including sexual harassment, is prohibited.
- Treat everyone equally regardless of age, ethnicity, nationality, gender, political views, religious affiliation, cultural practices and beliefs. (This does not prevent anyone from expressing their own beliefs and respectfully disagreeing with others.)
- Uphold the principles of scientific inquiry, be open to new ideas, and use logic and empirical evidence as tools to justify our question research.
- Be mindful of their surroundings, their fellow participants, and the impact their actions and words might have on others.
- Alert a member of the conference staff or the CinC Board if they notice a dangerous situation, someone in distress, or violations of this Code of Conduct, even if they seem inconsequential. All alerts will be treated sensitively and in a timely fashion.

The CinC Board reserves the right to prohibit attendance by anyone violating this code of conduct immediately and at any future meeting.

Brazil has a comprehensive legal framework to combat discrimination

and promote equality. The Federal Constitution of 1988 guarantees equality before the law and prohibits discrimination based on origin, race, sex, color, age, and other personal characteristics. Key legislation includes the Racial Equality Statute (Law 12.288/2010) and the Anti-Discrimination Law (Law 7.716/1989), which criminalizes acts of prejudice and discrimination.

A landmark decision by the Supreme Federal Court (STF) in 2019 extended the scope of Law 7.716/89 to include homophobia and transphobia as crimes of racism, recognizing that discrimination against LGBTQIA+ individuals constitutes a violation of constitutional rights. This ruling marked a significant step forward in protecting the rights and dignity of transgender people in Brazil.

Whova Conference App

We are using the Whova platform for both onsite and online attendees of #CinC2025. Download it on your phone to setup your individual schedule, network with fellow attendees and stay up to date with the latest news. All abstracts, preprints and posters can be accessed via Whova. Whova is available for Android, iOS and via any web browser.

Registration and Information Desk

Registration and Information Desk is located at the entrance of CCR (See page 13).

WiFi

You have access to the internet connecting to the free WiFi named **CinC2025**, password **CinC2025**.

Meals

The Sunday Symposium includes a coffee break (but no lunch) and an evening welcome reception at CCR (See page 21). Boxed lunch and dinner on Monday will be provided as part of the social program (See page 22). Lunch will be provided on Tuesday and Wednesday in the

Mata Atlantica Hall (See page 13) . Throughout the conference, coffee breaks (coffee, tea, water, pastry) are included as well and water dispensers are available.

Accompanying Persons (Guests)

Registered guests are welcome to join the Welcome Reception at CCR on Sunday evening, the social program on Monday afternoon in the Caminhos do Mar Park (please be in the Mata Atlântica foyer at 12:30 or a few minutes earlier on Monday), the Conference Dinner on Monday evening at the Mirante Restaurante, visiting the MASP at Tuesday evening and join the happy our in the Buteco da Praça after the MASP visit.

Accessibility

All venues are accessible also with wheelchairs. Don't hesitate to approach a volunteer if need any assistance.

Practical Information

Please check the FAQ in our website for additional information.

Weather

In September, São Paulo is transitioning into spring. The average high temperature is about $26\,^{\circ}$C ($78.8\,^{\circ}$F), and the average low is around $16\,^{\circ}$C ($60.8\,^{\circ}$F). It is often pleasant but can also be rainy, especially in the afternoons, so bring an umbrella.

Time Zone

São Paulo operates on Brasilia Time (BRT, UTC-3) throughout the year, without daylight saving time. In September, the sun rises around 6:00 am and sets around 6:00 pm.

Emergency Phone Numbers

- Police: 190.
- Emergency medical care (SAMU)*: 192.
- Firefighter: 193.

*SAMU (Mobile Emergency Care Service) is available to anyone who needs emergency medical care, regardless of nationality. SAMU care is a public health service and, therefore, does not charge for its services, regardless of the person's nationality or immigration status.

Money and Currency

The official currency in Brazil is the Brazilian Real (BRL), abbreviated as R$. As of the time of writing, 1 USD is approximately 5.40 BRL, 1 Euro is around 6.40 BRL, and 1 British Pound (GBP) is about 7.40 BRL. These rates may vary, so it is advisable to check the current rates before traveling. Please check the FAQ in our website for more information on exchange points near the venue and Paulista Avenue and airport.

Tipping: In Brazil, a 10% service charge is usually added to your restaurant bill. This is considered the standard tip, and additional tipping is optional but appreciated. Tipping is uncommon in taxis, though rounding up is a nice gesture.

Tips for Travelers: Most shops accept credit cards but bring some cash with you. Some smaller shops and stalls may not accept cards, so having BRL in small denominations is useful.

How to Get to the Event Location

The event will be held at the Centro de Eventos Rebouças, located in the heart of São Paulo.

Address: Avenida Rebouças, 600. The entrance is on Avenida Doutor Eneas de Carvalho Aguiar (see our quick map on page 2).

Check our quick map on page 2 on how to reach the place.

Address: Centro de Eventos Rebouças, Avenida Rebouças, 600 – Pinheiros, São Paulo, SP, Brazil

Here is how to reach the venue (**See page 2 for a map of the venue.**):

By Subway

The nearest subway station to the venue is Clinicas Station on the Green Line (Linha 2 – Verde) of the São Paulo Subway.

Hop off the train at Clinicas station, go past the station turnstiles, turn right and go all the way through the tunnel. This tunnel will take you to the closest exit to the venues. When you reach the street, turn left and walk about 500m. It will take you about 5 minutes walking to reach the venues. The Centro de Eventos Rebouças will be on your right.

By Bus

There are several bus lines that pass near the venue along Avenida Rebouças and Dr. Arnaldo Avenue. Popular bus lines include:

908T-10 (Butantã – Centro)

875C-10 (Jardim Guaraú – Pinheiros)

177H-10 (Terminal Campo Limpo – Clínicas)

Check local bus schedules for exact routes.

By Car

If you are driving to the venue, the best access is via Avenida Rebouças or Rua Teodoro Sampaio. The venue has parking facilities, but as spaces may be limited, it is advisable to arrive early. Paid parking is available both at the venue and in nearby parking garages.

By Ride-Hailing Services

You can easily get to the venue using ride-hailing apps like Uber or 99. Simply input “Centro de Eventos Rebouças” as your destination.

Nearby Landmarks

The venue is located near the Hospital das Clínicas and the Pinheiros district, making it a central and accessible location. For further directions or assistance, please contact the event organizers.

Electric Standards

The standard voltage in São Paulo is typically 127 volts, but some areas use 220 volts at a frequency of 60Hz. Type N and Type C sockets are standard, with two or three round prongs. You may need a plug adapter and possibly a voltage converter depending on your devices.

For Authors and Speakers

Oral Presentations

- The time allocated for each oral presentation is 10 minutes, followed by 5 minutes for Q&A. The only exception to the 10-minute limit for oral presentations is for the four finalists in the Rosanna Degani Young Investigator Award competition, who are each allotted 15 minutes for their talks, followed by 5 minutes for discussion.
- You will be introduced by the session's chairperson, who will also open the Q&A session after your presentation.
- Questions will be exclusively asked at the end of each speech, aiming to minimize interruptions and ensure a seamless online experience for attendees.
- Speakers are expected to adhere strictly to the event schedule, which will be enforced to finish sessions on time and to permit participants to move successfully from one parallel session to another.
- The preferred option is to use the presentation computer provided by us (Powerpoint, Keynote, web browser and PDF viewer available). You can bring a USB memory stick to the help desk (see map on first page) to upload your presentation. If you rather want to use your own device, you can connect to Zoom via Whova and share your screen. Be aware that this depends on your WiFi connection and might cause a bit of delay on the presentation screen, especially during animations or videos. No audio will be transmitted through Zoom, so this option is not for you if you have sound included in your presentation.
- Prepare your presentation before coming to the conference using suitable software, e.g., Microsoft PowerPoint, Apple Keynote, or PDF. If your presentation includes video content, make sure it plays properly on the system available at the conference venue by testing it beforehand.
- All speakers must come to the room where you will present at least 10 minutes prior to your session, find and check in with one

of the session chairs.

- The session chairpersons need to know who will present each scheduled paper. Help them by introducing yourself, and letting them know which paper you will present.
- There will also be a local helper available to provide technical assistance.

Poster Presentations

- All presenters will upload their poster as a PDF file (max. size of 10 MB) to the conference hosting site.
- In-person presenters will come to their poster session and present and discuss their study with conference attendees during their scheduled session (see page 44). Remote participants will be able to communicate with conference attendees (remote and in-person) via Whova's messaging features.
- Discuss your work with other conference attendees during the poster session. Authors are required to be present at their on-site posters during their assigned sessions. Authors presenting more than one poster in a session will normally find their posters assigned to adjacent locations; ask the poster session chair to reassign poster stands if necessary.
- All posters that are presented at the conference must be in portrait (i.e., vertical) orientation and be no larger than A0 size. A0 is equivalent to 841 (width) x 1189 (height) mm or 33.1 x 46.8 inches.
- Please mount your posters before your respective poster session on the poster boards and remove them after the poster session. The organizatio n Staff will be there to assist you.
- Posters are grouped by subject area, and each poster should be hung up on the stand assigned to it.

Scientific Program

See the back side of this booklet for an overview of sessions.

Monday, September 16

Welcome to CinC 2025
Mon, Sep 15 08:30-09:00 in room Amazônia
Chairs: Olivier Meste, João Salinet

YIA First Finalists (RDYA)
Mon, Sep 15 09:00-10:30 in room Amazônia
Chairs: Marianna Meo, Olivier Meste

09:10 *Statistical Shape and Appearance Model of Left Atrial Geometry and Conduction Velocity in Atrial Fibrillation (117)*
Alexander James Sharp; Timothy R. Betts; Abhirup Banerjee

09:30 *Evaluating the Influence of Different Realistic Fibrosis Patterns on Cardiac Arrhythmias using Computational Models (317)*
Guilherme Martins Couto; Brodie Lawson; Kevin Burrage; Joventino de Oliveira Campos; Rodrigo Weber dos Santos

09:50 *Proof-of-Concept for a Real-Time ECG-Guided Framework for Ventricular Tachycardia Exit Site Localization and Catheter Navigation (431)*
Noah Emmert; Konstantinos Aronis; Shijie Zhou

10:10 *Deep Learning-Based Left Atrial Segmentation and Hemodynamics Estimation using 4D Flow MRI (318)*
Jonas Leite; Louis Parker; Marie Shannon Soulez; Tom Da Silva-Faria; Khaoula Bouazizi; Perrine Marsac; Elie Mousseaux; Moussa Gueda Moussa; Nicolas badenco; Estelle gandjbakhch; Alban redheuil; Mikaël Laredo; Emilie Bollache; Nadjia Kachenoura

ECG Biomarkers and Risk Stratification (S21)
Mon, Sep 15 11:00-12:30 in room Amazônia
Chairs: Alberto Porta, Joachim Behar

11:00 *Simple Risk Score for Patients with Syncope in the Emergency Department using the ECG (50)*
Asger Knudsen; Claus Graff; Johannes Struijk

11:15 *When the heart tells the age: clinical implications of the ECG-age (473)*
Tom Ribeiro

11:45 *On the Relevance of ECG Features for Survival Prediction. Application to Septic Shock (242)*
Raphael aditya Chalard; Amar Kachenoura; Guy Carrault; GE Di; Antoine Kimmoun; Alexandre Mebazaa; Ahmad Karfoul

12:00 *T Wave Peak to End Morphology Restitution as Biomarker in Brugada Syndrome (373)*
Neurys Gomez Fonseca; Julia Ramírez; Alba Isabel Roquero; Flavio Palmieri; Elena Arbelo Lainez; Juan Pablo Martínez; Pablo Laguna

12:15 *Electrocardiographic and Vectorcardiographic Markers of Cardiac Involvement in Systemic Lupus Erythematosus: A Machine Learning Approach (389)*
Alejandro Perez; Elisa Ramirez; Francisco Castells; Muhammad Soyfoo; Ruben Casado; Jose Millet

Cardiac Digital Twins (S22)
Mon, Sep 15 11:00-12:30 in room Cerrado
Chairs: Natalia Trayanova, Jorge Sánchez

11:15 *Accurate and Efficient Cardiac Digital Twin from Surface ECGs: Insights into Identifiability of Ventricular Conduction System (347)*
Thomas Grandits; Karli Gillette; Gernot Plank; Simone Pezzuto

11:30 *Towards the Validation of a Digital Twin Pipeline on Patients with Bundle Branch Block (287)*
João Pedro Banhato Pereira; Lucas Arantes Berg; Julia Camps; Ruben Doste; Thaís de Jesus Soares; Matheus Cardoso Faesy; Tiago Dutra Franco; Fabrício Santos; Raul Pereira Barra; Thaiz Ruberti Schmal; Thiago Goncalves Schroder e Souza; Blanca Rodriguez; Abhirup Banerjee; Joventino de Oliveira Campos; Rodrigo Weber dos Santos

12:00 *Digital Twin of Ventricular Activation Through Realistic Purkinje Network Calibrated to Clinical ECGs (358)*
Sandra Perez-Herrero; Jorge Sanchez; Ferran Prats-Domenech; Lucia Riaza-Martin; Ferran Roses-Noguer; Beatriz Trenor; Javier Saiz; Guadalupe Garcia Isla

12:15 *Digital Twin of a Rabbit Heart in Langendorff Setup (424)*
Daniel moreira Leme; Saleem Ullah; Angélica Drielly Quadros; Jimena Gabriela Siles Paredes; Mayra Urbieta Barbosa; Joao Salinet; Joventino de Oliveira Campos; Rodrigo Weber dos Santos

11:00 *Development of a Three-Dimensional Computational Pipeline in Python for Personalized Heart Modeling (329)*
Filipe De Lima Namorato; Daniel moreira Leme; Thaís de Jesus Soares; Rafael Sachetto Oliveira; Thaiz Ruberti Schmal; Rodrigo Weber dos Santos; Joventino de Oliveira Campos

11:45 *Functional Personalization of ECGI-Twins Using Non-Invasive AF Dynamics (269)*
Clara Herrero Martín; Marta Martínez Pérez; Ines Llorente; Maite Izquierdo de Francisco; Felipe Atienza; Joaquín Osca Asensi; Maria de la Salud Guillem Sánchez; Caroline H. Roney; Andreu M. Climent; Ismael Hernández-Romero

Photoplethysmography (S23)

Mon, Sep 15 11:00-12:30 in room Caatinga

Chairs: Guy Carrault, José Joaquín Rieta

11:00 *The Beat-to-Beat Responses of the Reflection Index and Stiffness Index are Linked to the Increases in Arterial Pressure and Heart Rate Triggered by Active Standing (31)*
Salvador Carrasco-Sosa; Aldo Rodrigo Mejía-Rodríguez; Alejandra Guillén-Mandujano

11:15 *MIMIC-III-Ext-CA: a MIMIC-III Derived Dataset of Cardiac Arrests in Photoplethysmographs (135)*
Roelof G. Hup; Roel J. H. Montree; Lukas Dekker; Hanno L. Tan; Xi Long; Rik Vullings

11:30 *Exploiting Ambient Light Interference to Detect Signal Integrity in Photoplethysmographic Recordings (349)*
Matteo Ricci; Daniel Suarez; Lorenzo Facila; Fernando Hornero; Raul Alcaraz; Jose J Rieta

11:45 *Enhancing Cardiovascular Risk Assessment through Longitudinal PPG Analysis (374)*
George Searle; Stefan van Duijvenboden; Julia Ramírez; Andrew Tinker; Patricia Munroe; Pier Lambiase; Alun Hughes; Michele Orini

12:00 *Beat-Wise Effect of Heart-Paced Walking on In-Ear Photoplethysmography (398)*
Aurora Rosato; Eric Rullman; Seraina Anne Dual

12:15 *Feasibility of Unsupervised Sleep Apnea Screening Using Pulse Rate Oscillations and SpO2 with a Wrist-Worn Device (150)*
Diego Cajal; Rodrigo Lozano; Victoria Gil; Jose Pablo Cubero Marin; Jose M. Marin; Eduardo Gil; Jesus Lazaro; Raquel Bailón

Cardiovascular imaging (S24)

Mon, Sep 15 11:00-12:30 in room Pampa

Chairs: Jake Bergquist, Cristian Linte

11:00 *The inverse radius for detection of patients with cardiac dyssynchrony (113)*
Martin S. Andersen; Cooper Moore; Olaf T. von Ramm; Peter Søgaard; Johannes Struijk; Samuel Emil Schmidt

11:15 *New Echocardiographic Risk Score for HCM Patients Follow-up (83)*
Marion Taconne; Valentina Corino; Annamaria del Franco; Eleonora Insinna; Pietro Cerveri; iacopo olivotto; Luca Mainardi

11:30 *Preliminary Findings on the Correlation between Left Atrial Wall Shear Stress and Atrial Endocardial Voltage in Atrial Fibrillation Patients (311)*
Camilla Cortesi; Matteo Falanga; Jonas Leite; Marie Shannon Soulez; Nadjia Kachenoura; Cristiana Corsi

11:45 *Computed Tomography-Based Left Ventricular Tissue Heterogeneity in Ischaemic Cardiomyopathy: Investigation of Adipose Tissue and Fibrosis with Extracellular Volume (352)*
Iulia Nazarov; Luca Azzolin; Aurel Neic; Mohammad Kayyali; Sri Kousthubha Allampalli; Ursula Rohrer; Ronak Rajani; Fernando Campos; Gernot Plank; John Whitaker; Martin Bishop

12:00 *A Multi-Task Deep Neural Network for Segmentation and Landmark Detection in Cardiac Computerized Tomography (402)*
Nicla Mandas; Giulia Baldazzi; Andrea Pitzus; Giacomo Tarroni; Danilo Pani

12:15 *Opportunistic Screening for Thoracic Aortic Calcification on Non-Dedicated CT via Deep Learning (415)*
Catharine De Vita Graves; Antonildes Assunção-Jr; Gabriela Liberato de Sousa; Roberto Nery; Carla Franco; Cesar Nomura; Marco Antonio Gutierrez

Tuesday, September 17

Signal Quality and Preprocessing Techniques (S31)
Tue, Sep 16 08:30-10:00 in room Amazônia
Chairs: Pablo Laguna, Ana Mincholé

08:30 *Bidirectional Fiducial Matching of Electrocardiography and Phonocardiography for Multimodal Signal Quality Assessment (138)*
Daniel David Proaño-Guevara; André Lobo; Cristina Oliveira; Cátia Isabel Costa; Ricardo Fontes-Carvalho; Hugo Plácido da Silva; Francesco Renna

08:45 *Wave Masking: Effect of Padding Techniques on the Reconstruction of Electrocardiogram (145)*
Ekenedirichukwu Nelson Obianom; Noor Qaqos; Abdulhamed Mohammed Jasim; Shamsu Idris Abdullahi; Fan Feng; G. Andre Ng; Xin Li

09:00 *Ventricular Electrical Dyssynchrony as a Predictor of Heart Failure (395)*
Zuzana Koscova; Radovan Smisek; Ivo Viscor; Pavel Jurak; Filip Plesinger

09:15 *Deep Learning Signal Quality Assessment for Continuous Wearable ECG Monitoring (382)*
Estela Ribeiro; Quenaz Bezerra Soares; Douglas de Andrade de Almeida; Renata Gomes Sanches Verardino Verardino; Tallita Costa Reis; Denival Nascimento Vieira-Júnior; Jaqueline Pereira; Nelson Samesima; Guilherme de Castro Machado Rabello; Rosangela Monteiro; Fabio Jatene; Marco Antonio Gutierrez

09:30 *A Framework for Task-Specific Signal Quality Assessment: A Case Study in Heart Rate Estimation (417)*
Aron Syversen; Zhiqiang Zhang; David Jayne; Alexios Dosis; David C. Wong

09:45 *A Neural Network Architecture for ECG Lead Reconstruction: Separating Shared and Lead-Specific ECG Characteristics (337)*
Mohammadsina Hassannia; Reza Sameni

Modeling cardiac channels, cells and tissue (S32)
Tue, Sep 16 08:30-10:00 in room Cerrado
Chairs: Ronald Wilders, José María Ferrero

08:30 *The HCM related MYBPC c.772G>A mutation: a model dependency study (278)*
Fazeelat Mazhar; Alan Fabbri; Eugenio Ricci; Chiara Bartolucci; Stefano Severi

08:45 *Modeling Ion Channel Delays with Fractional Calculus Reveals Early Afterdepolarizations Mechanisms (62)*
Noemi Zeraick Monteiro; Rodrigo Weber dos Santos; Sandro R. Mazorche

09:00 *Impact of SK Channel Conductance Variations in Endocardial and Epicardial Cells on Arrhythmogenesis in Failing Ventricles: a 1-D Simulation Study (52)*
Marta Gomez; Jesús Carro; Bolea Juan; Esther Pueyo; Violeta Monasterio

09:15 *A Likelihood-Based Framework for Analyzing Sarcomeric Protein Machinery in Cardiac Myocyte Models (314)*
Viviane Timmermann; Jens Timmer

09:30 *The Role of Cav1.3 Channels in Cardiac Pacemaking: Developing a Single-cell Rabbit 3D Model (116)*
Eugenio Ricci; Chiara Bartolucci; Eleonora Torre; Pietro Mesirca; Matteo Elia Mangoni; Stefano Severi

09:45 *Development of a Sex-Specific Action Potential Model for Rabbit Atrial Cells (370)*
Camilla Pera; Katja E. Odening; Ulrich Schotten; Simone Pezzuto

Cardiac Vibration Signals (S33)
Tue, Sep 16 08:30-10:00 in room Caatinga
Chairs: Kouhyar Tavakolian, Ramon Casanella

08:30 *Deep learning-based approach for denoising heart vibration signals (55)*
Salman Aluhammad Alali; Amar Kachenoura; Lotfi Senhadji; Alfredo Hernandez; Cindy Michel; Laurent Albera; Ahmad Karfoul

08:45 *Automatic beat-to-beat delineation of multiple fiducial points in the Seismocardiogram (228)*
Emil Korsgaard; Ahmad Agam; Peter Søgaard; Kasper Emerek; Jørn Wulff Helge; Kasper Sørensen; Johannes Struijk; Samuel Emil Schmidt

09:00 *The BCG Model: A Solved Problem? (122)*
Ramon Casanella

09:15 *Shifts in Ballistocardiography Fiducials Reflect Increases in Pulse Wave Velocity Measured by 4D-Flow MRI (310)*
Amin Hossein; Jeremy Rabineau; Vitalie Faoro; Philippe van de Borne

09:30 *Cardiorespiratory coupling evaluation using smart-eyewear technology: a preliminary study (303)*
Federica Mozzini; Sarah Solbiati; Sara Bernasconi; Alessandra Angelucci; Maria Antonella Lo Mauro; Andrea Aliverti; Diana Trojaniello; Enrico Caiani

09:45 *A Wearable Patch for Remote Monitoring of Cardiac Electromechanical function (109)*
Oliver Korup Damsgaard; Emil Korsgaard; Samuel Emil Schmidt

Open Software and Tools for Digital Twins of the Heart (S34)
Tue, Sep 16 08:30-10:00 in room Pampa
Chairs: Rodrigo Weber dos Santos, Blanca Rodríguez

08:30 *Open Software and Tools for Digital Twins of the Heart (223)*
Blanca Rodriguez; Rodrigo Weber dos Santos

09:00 *Scalable Construction of Anatomically Detailed Biatrial Models with Personalised Electrophysiology from Imaging or Electroanatomic Mapping Data (44)*
Caterina Vidal Horrach; Laura Bevis; Mahmoud Ehnesh; Semhar Biniam Misghina; Ovais Ahmed Jaffery; Carlos Edgar Lopez Barrera; Alexander M. Zolotarev; Fuyu Cheng; Steven Niederer; Edward Vigmond; Caroline H. Roney

09:15 *Sex-specific Cardiac Digital Twins of Human Ventricular Electrophysiology using 12-Lead ECG and MRI (164)*
Julia Camps; Maxx Holmes; Ruben Doste; Lucas Arantes Berg; Zhinuo Jenny Wang; Blanca Rodriguez

09:30 *Efficient Open-Source GPU Solver for Cardiac Electrophysiology Digital Twins (40)*
Rafael Sachetto Oliveira

Deep Learning and AI in ECG Analysis (S41)
Tue, Sep 16 10:30-12:00 in room Amazônia
Chairs: Shijie Zhou, Reza Sameni

10:30 *Test-Time Adaptation for a Generalizable Deep Learning-Based ECG Segmentation (57)*
Alaa Salama; Amar Kachenoura; Salman Aluhammad Alali; Guy Carrault; Lotfi Senhadji; Ahmad Karfoul

10:45 *AI ECG integration in practice (474)*
Abhishek Desmukh

11:15 *Machine Learning-Driven Algorithm for Improved Detection of Brief Cardiac Arrhythmias (299)*
Lucia Vavassori; Valentina Corino; Raphael Schneider; Javier Saiz-Vivo

11:30 *Prognostic Role of Electrocardiographic Alternans in Heart Failure Patients with Implanted Cardioverter Defibrillator: Comparison of Machine Learning Methods (307)*
Ilaria Marcantoni; Erica Iammarino; Agnese Sbrollini; Cees A. Swenne; Laura Burattini

11:45 *Fast, Accurate, and Robust Long-ECG Segmentation Through Multi-Point Iterative Warping and Dynamic Template Generation (222)*
Paolo G. Cachi

Modeling cardiac arrhythmias and ablation (S42)

Tue, Sep 16 10:30-12:00 in room Cerrado

Chairs: Simone Pezzuto, Beatriz Trenor

10:30 *Uncovering Arrhythmic Substrate in a Heart Failure Patient Using Digital Twins (301)*

Thaís de Jesus Soares; Guilherme Martins Couto; Yan B. Werneck; Daniel Keim Almeida; Daniel moreira Leme; João Pedro Banhato Pereira; Filipe De Lima Namorato; Matheus Cardoso Faesy; Tiago Dutra Franco; Fabrício Santos; Raul Pereira Barra; Marcelle Cristina da Silva Bastos Vasconcelos; Thaiz Ruberti Schmal; Thiago Goncalves Schroder e Souza; Rafael Sachetto Oliveira; Joventino de Oliveira Campos; Rodrigo Weber dos Santos

10:45 *Populations of Models Show Increased Arrhythmogenicity of the Hypertrophic Cardiomyopathy MYBPC3-c.772G>A Mutation (241)*

Eugenio Ricci; Fazeelat Mazhar; Alan Fabbri; Chiara Bartolucci; Stefano Severi

11:00 *Impact of Mesh Resolution on Re-entry Patterns in Healing Infarction using a Biventricular Digital Twin Model (270)*

Lucas Arantes Berg; Hector Martinez-Navarro; Ruben Doste; Blanca Rodriguez

11:15 *Tissue anisotropy is insufficient to capture experimental lesion morphology in cardiac PFA modelling (265)*

Argyrios Petras; Gerard Amoros Figueras; Zoraida Moreno Weidmann; Tomas Garcia-Sanchez; David Vilades Medel; Aurel Neic; Edward Vigmond; Antoni Ivorra; Jose Guerra; Luca Gerardo Giorda

11:30 *A Three-State Thermal Cell Death Model for the Assessment of Esophageal Damage in Cardiac Ablation (36)*

Jakob Haselbacher; Minha Anees; Zoraida Moreno Weidmann; David Vilades Medel; Jose Guerra; Argyrios Petras; Luca Gerardo Giorda

11:45 *Predicting Arrhythmias via Reentrant Vulnerability Index Mapping in Post-Infarction Hearts Under Stellate Ganglion Modulation (306)*

Javier Villar Valero; Lledo Nebot; Juan F Gomez; Bastiaan J.D Boukens; Beatriz Trenor

Medical Informatics (S43)

Tue, Sep 16 10:30-12:00 in room Caatinga

Chairs: Xin Li, Francesco Renna

10:30 *Wearable Estimation of Heart Rate Recovery to Physical Activity During Daily Life in Patients with Recurrent Major Depressive Disorder (267)*

Alberto Barquero ruiz; Esther Garcia Pages; Spyridon Kontaxis; Sara Siddi; Josep Maria Haro; Nicholas Cummins; Srinivasan Vairavan; matthew hotopf; Femke Lamers; Brenda Pennix; richard dobson; Vaibhav Narayan; Raquel Bailón; Pablo Armañac-Julián

10:45 *Expansion of Smartwatch Use in Daily Life Activities: Reliability in Heart Rate Variabbility Measurement (215)*

Kelly Correa Baioco da Silva; Petronio Cabral Ferreira; Ana Leticia Gomes dos Santos; stella tassinari maximo; Christian Goncalves Sassaki; Samuel Minucci Camargo; silvia helena bastos de paula; Jose L. Puglisi; Daniel Gustavo Goroso

11:00 *Heart Rate Analysis to Identify At-Risk Fetuses for Hypoxic-Ischemic Encephalopathy during Fever (445)*
Ethan Grooby; Aditi Lahiri; Yvonne W. Wu; Lawrence David Gerstley; Michael William Kuzniewicz; Marie-Coralie Cornet; John R. Parker; Philip Warrick; Robert E. Kearney

11:15 *VizCOM: A Novel Tool for Advanced Visualization and Analysis of Cardiac Optical Mapping Data (443)*
Christopher H. Chiu; Grayson Molesworth; Mikael Toye; Elizabeth Cherry; Flavio Fenton

11:30 *Integrated System for Simultaneous Optical and Electrical Mapping with Experimental Control and Data Logging in Human and Pig Heart Studies (412)*
Vinicius de Paula Silva; Jimena Gabriela Siles Paredes; Tainan Cerqueira Neves; Joao Salinet; Ilija Uzelac

11:45 *A New Database of Multimodal Sensor Records and Echocardiographic and Peptide Test Results of HF Patients and Controls: Possibilities and Perspectives (326)*
Jovana Petrovic; Masa Tiosavljevic; Mirjana Stojanovic; Aleksandar Lazovic; Marija Ivanovic; Aleksandra Maluckov; Predrag Tadić; Ljupčo Hadžievski; Arsen D. Ristic; Vladan D. Vukcevic

ECGI methods (S44)

Tue, Sep 16 10:30-12:00 in room Pampa

Chairs: Óscar Barquero, María Guillem

10:30 *Accurate Synthesis of the 12-Lead Electrocardiogram from a 3-Lead Electrocardiogram Measured by a Mobile Device (240)*
Jovana Petrovic; Marjan Miletic; Goran Gligoric; Vladimir Atanasoski; Petra Belicev; Uros Ralevic; Jelena Krsic; Aleksandar Lazovic; Danka Stojanovic; Aleksa Obradovic; Rade Babic; Dejan Vukajlovic; Ljupčo Hadžievski; Bosko Bojovic; Branislav Vajdic

10:45 *A Volumetric ECGI Approach for Regular Rhythms (320)*
Jorge Vicente Puig; Judit Chamorro-Servent; Ernesto Zacur; Ines Llorente; Marta Martínez Pérez; Jorge Sanchez; Jana Reventós Presmanes; Ivo Roca Luque; Lluis Mont; Felipe Atienza; Maria de la Salud Guillem Sánchez; Andreu M. Climent; Ismael Hernández-Romero

11:00 *Ensemble Learning on Body surface Potential Mapping P waves: A Novel Approach to Predict Atrial fibrillation Recurrence Post-direct-current cardioversion (155)*
Fan Feng; Ekenedirichukwu Nelson Obianom; Noor Qaqos; ibrahim antoun; Shamsu Idris Abdullahi; Abdulhamed Mohammed Jasim; Abdulmalik Koya; G. Andre Ng; Xin Li

11:15 *Spatially Coherent Filtering of Multilead ECG via Laplace-Beltrami Eigenfunctions Decomposition (261)*
Ismael Hernández-Romero; Jorge Vicente Puig; Ernesto Zacur; David Lundback; Andreu M. Climent; Maria de la Salud Guillem Sánchez

11:30 *A Complex Gaussian Process Framework for Coherent ECGI Mapping and Isthmus Identification in Reentrant VT (390)*
Carlos Fambuena Santos; María Correas García; Andrea Cano Cabañero; Jana Reventós Presmanes; Jean-Baptiste Guichard; Andreu Porta; Ivo Roca Luque; Alfred Peris; Andreu M. Climent; Maria de la Salud Guillem Sánchez

11:45 *Development of a Wireless System for Body Surface Potential Mapping (290)*
Luma Rissatti Borges do Prado; Vinicius de Paula Silva; Idagene Cestari; Marcelo Mazzetto; Joao Salinet

Careers in industry session during lunch with Renata Valeri de Freitas (Escola Politécnica, University of São Paulo), Rey Sepehr (Baxter) and Luma Rissatti (Philips / INATEL)
Tue, Sep 16 12:20-12:55 in room Cerrado
Chairs: Marianna Meo

Integrating AI and Mechanistic Models to Improve Cardiac Electromechanics (S51)
Tue, Sep 16 13:00-14:30 in room Amazônia
Chairs: Rodrigo Weber dos Santos, Bernardo Martins Rocha

13:00 *Integrating AI and Mechanistic Models to Improve Cardiac Electromechanics (53)*
Bernardo Martins Rocha; Rodrigo Weber dos Santos; Joventino de Oliveira Campos

13:30 *Polynomial Chaos Expansion, AI and data assimilation for uncertainty quantification of cardiac mechanics (254)*
Joakim Sundnes

13:45 *Physics-informed neural networks for inverse problems in cardiac electrophysiology (369)*
Francisco Sahli Costabal

14:00 *Discovering Cardiac Action Potential Model Equations Using Sparse Identification of Nonlinear Dynamics (426)*
Cole S. Welch; Elizabeth Cherry

Modeling atrial electrophysiology and fibrillation (S52)

Tue, Sep 16 13:00-14:30 in room Cerrado

Chairs: Javier Saiz, Molly Maleckar

13:00 *Comparison of LGE MRI Scar Identification Methods for Atrial Computational Modeling (166)*
Jake Bergquist; Ben A. Orkild; Eugene Kwan; Akil Narayan; Karli Gillette; Rob MacLeod; Ravi Ranjan

13:15 *Automated workflow to Integrate Electroanatomic Maps into Patient-Specific Bi-atrial Models For Personalized AF Treatment (385)*
Caterina Vidal Horrach; Sam Coveney; Ovais Ahmed Jaffery; Mahmoud Ehnesh; Steven Niederer; Shohreh Honarbakhsh; Sanjiv Narayan; Caroline H. Roney

13:30 *Towards Personalised Therapy in Atrial Fibrillation: The Role of Patient-Specific Fibrosis (248)*
Semhar Biniam Misghina; Alexander M. Zolotarev; Elisa Rauseo; Carlos Edgar Lopez Barrera; Steven Niederer; Gregory Slabaugh; Gernot Plank; Nay Aung; Steffen E. Petersen; Patricia Munroe; Edward Vigmond; Caroline H. Roney

13:45 *Influence of Mesh Resolution on Atrial Electrophysiological Simulations (280)*
Duna De Luis Moura; Chiara Celotto; SeyedSaman Golmaryami; María Termenón Rivas; Giada Sira Romitti; Etel Silva Garcia; Juan Fernandez-Armenta; Jose F Rodriguez Matas; Alejandro Liberos; Ignacio Garcia-Fernandez; Miguel Rodrigo

14:00 *Identification of Atrial Fibrillation Biomarkers through Virtual Populations with Anatomical and Electrophysiological Variability (312)*
Giada Sira Romitti; María Termenón Rivas; Alejandro Liberos; Miguel Rodrigo

14:15 *Impact of Body Mass Index on Power Distribution in High-Power RF Ablation for Atrial Fibrillation: Insights from Virtual Patients (305)*
Minha Anees; Zoraida Moreno Weidmann; David Vilades Medel; Jose Guerra; Luca Gerardo Giorda; Argyrios Petras

Analysis of Rhythm Disorders (S53)

Tue, Sep 16 13:00-14:30 in room Caatinga

Chairs: Juan Pablo Martinez, Martin Schmidt

13:00 *ECG-Based Long-Term Prediction of Atrial Fibrillation (124)*
Livia Colucci; Mashroor Khan; Leif Sornmo; Emma Svennberg; Martin Stridh

13:15 *Assessment of the Relational Strength Between Potential Triggers and the Occurrence of Ectopic Beats (114)*
Vilma Plusciauskaite; Andrius Petrenas

13:30 *Transfer Learning to Focus Self-Learning AI on Rhythm Improves Interpretability in Atrial Fibrillation Detection (396)*
Alexander Hammer; Matteo Zannini; Hagen Malberg; Martin Schmidt

13:45 *Short- and Long-term Effects of Left Bundle Branch Area Pacing on the T wave of the ECG (409)*

Clara Sales Bellés; Jorge Melero-Polo; Mercedes Cabrera-Ramos; Isabel Montilla-Padilla; Laura Sorinas; Inés Julián; Ana Mincholé; Javier Ramos-Maqueda; Esther Pueyo

14:00 *Temporal Variability of Ventricular Activation in Brugada Syndrome Patients (333)*
Sofia Romagnoli; Alba Isabel Roquero; Alba Martin; Flavio Palmieri; Esther Pueyo; Pedro Gomis; Pablo Laguna; Elena Arbelo Lainez; Ana Mincholé

14:15 *Brugada ECG Variability by Electrode Placement (356)*
Mohammad Kayyali; Ana Mincholé; Fernando Campos; Iulia Nazarov; Gernot Plank; Aurel Neic; Luca Azzolin; Shuang Qian; John Whitaker; Pablo Lamata; Martin Bishop

Physionet Challenge (S54)
Tue, Sep 16 13:00-14:30 in room Pampa
Chairs: Gari Clifford, Matthew Reyna

13:00 *Detection of Chagas Disease from the ECG: The George B. Moody PhysioNet Challenge 2025 (68)*
Matthew A. Reyna; James Tyler Weigle; Zuzana Koscova; Jan Pavlus; Soheil Saghafi; Paulo R. Gomes; Andoni Elola; Mohammadsina Hassannia; Kiersten S. Campbell; Ali Bahrami Rad; Antonio Luiz Ribeiro; Reza Sameni; Gari D. Clifford

13:15 *Using a TensorFlowLite LSTM Deep Learning Model to Screen for Chagas (99)*
Zoe E. Boysen; Ronald Yang; Emilia Fallman

13:30 *Managing Label Uncertainty in the Detection of Chagas Disease from the ECG (100)*
Sergio González Vázquez; ChunTi Chou; Casey Hong

13:45 *Knowledge Distillation from General ECG Classification Model for Chagas Disease Detection in 12-Lead ECGs (132)*
Petr Nejedly; Radovan Smisek; Ivo Viscor; Pavel Jurak; Filip Plesinger

14:00 *Two-Stage Domain Adversarial Learning to Identify Chagas Disease from ECG and Patient Demographic Data (158)*
Xiaoyu Wang; Aron Syversen; James Battye; Sharon Yuen Shan Ho; Zixuan Ding; David C. Wong

14:15 *SwissBeatsNet: A Multilead Masked Autoencoder for Chagas Disease Detection (160)*
Lucas Erlacher; Andrea Agostini; Samuel Ruiperez-Campillo; Thomas M. Sutter; Ece Ozkan; Julia E. Vogt

Ventricular Arrhythmias (S61)

Tue, Sep 16 14:45-16:15 in room Amazônia

Chairs: Pyotr Platonov, Johan de Bie

14:45 *MRI derived mitral valve and ventricle shape biomarkers for arrhythmic mitral valve syndrome (15)*
Giulia Monopoli; Nickolas Forsch; Mary M. Maleckar

15:00 *Near-Term Prediction of Ventricular Arrhythmias from Implantable Cardioverter Defibrillator Time-Series Data – A Proof-of-Concept Study (121)*
Paul Ghoufi; Amar Kachenoura; Guy Carrault; Serge Boveda; Rodrigue Garcia; Warda Aoudjeghout; Fawzi Kerkouri; Eloi Marijon; Ahmad Karfoul

15:15 *Validation of In-silico Pace Mapping for Guiding Ventricular Tachycardia Ablation in Clinical Practice (165)*
Fernando Campos; Ursula Rohrer; Karli Gillette; Ali-Razak Rashid; Iulia Nazarov; Janneke Burger; Pranav Bhagirath; Luca Azzolin; Aurel Neic; Christopher Aldo Rinaldi; Gernot Plank; John Whitaker; Martin Bishop

15:30 *From Pig to Human: Endo-Epicardial Substrate Characterization Using Dual Optical Mapping (216)*
Jimena Gabriela Siles Paredes; Casey Lee-Trimble; Evan H. Rheaume; Flavio Fenton; Joao Salinet; Ilija Uzelac

15:45 *Biventricular Model of Transient Outward Potassium Current Transmural Heterogeneity in Brugada ECG (256)*
Mohammad Kayyali; Ana Mincholé; Fernando Campos; Iulia Nazarov; Gernot Plank; Aurel Neic; Luca Azzolin; Shuang Qian; John Whitaker; Pablo Lamata; Martin Bishop

16:00 *Discriminating Drug-Induced Ventricular Fibrillation via Wavelet Transforms and Deep Temporal Models (393)*
Dafne Lozano Paredes; Luis Bote-Curiel; Juan José Sánchez Muñoz; Francisco-Manuel Melgarejo-Meseguer; Francisco-Javier Gimeno-Blanes; Jose Luis Rojo-Alvarez

Methods for cardiac modeling (S62)

Tue, Sep 16 14:45-16:15 in room Cerrado

Chairs: Edward Vigmond, Eugenio Ricci

14:45 *Efficient Generation of Populations of Cardiac Models (194)*
Elizabeth Cherry; Darby Ian Cairns

15:00 *Cocoro: Fast Simulation of Cardiac Electrophysiology with WebGPU (271)*
Ricardo Maximiliano Rosales; Ana Mincholé; Esther Pueyo

15:15 *Neural Network Models as Surrogates of Classical Ordinary Differential Equations for Reduced-Order Single-Cell Electrophysiology (404)*
Rodrigo Weber dos Santos; Bernardo Martins Rocha; Yan B. Werneck; Rafael Sachetto Oliveira

15:30 *Reproducing Cardiac Ionic Model Properties Using a Discrete-Time Model (414)*

Rikhil Seshadri; Maxfield Roth Comstock; Elizabeth Cherry

15:45 *Constrained-based sparse identification of cardiac electrophysiology models using PySINDy (433)*
Mariana A. S. de Carvalho; Rodrigo Weber dos Santos; Bernardo Martins Rocha

16:00 *High-Performance Cardiac Electrophysiology Simulation with SSI-ADI: Second-Order Accuracy and GPU-Driven Acceleration (439)*
Guilherme Martins Couto; Noemi Zeraick Monteiro; Marcelo Lobosco; Bernardo Martins Rocha; Joventino de Oliveira Campos; Rodrigo Weber dos Santos

Pediatric and Developmental ECG Analysis (S63)
Tue, Sep 16 14:45-16:15 in room Caatinga
Chairs: José Millet, Jesús Lázaro

14:45 *Study of Peak-to-Peak Amplitude Distribution in Cardiac Rhythms: Electrophysiological Mapping in Langendorff-Perfused Rabbit Hearts (273)*
Jose Carlos Gomes Junior; Jimena Gabriela Siles Paredes; Tainan Cerqueira Neves; Angélica Drielly Quadros; Saleem Ullah; Vinicius de Paula Silva; Joao Salinet

15:00 *Transfer Learning for ECG-Based Age Estimation from Adult to Pediatric Populations (359)*
Sara Battiston; Niccolò Gonzato; Md Moklesur Rahman; Massimo W Rivolta; Antonio Sanzo; Irene Raso; Sara Santacesaria; Gianvincenzo Zuccotti; Savina Mannarino; Roberto Sassi

15:15 *Artificial Intelligence in Pediatric Electrocardiogram Analysis: Sex and Age Estimation Across Puberty (366)*
Md Moklesur Rahman; Sara Battiston; Massimo W Rivolta; Antonio Sanzo; Irene Raso; Sara Santacesaria; Gianvincenzo Zuccotti; Savina Mannarino; Roberto Sassi

15:30 *Ic4FECG: A New Index for Automatic Selection of the Most Relevant Independent Component in Noninvasive Fetal Electrocardiography (351)*
Noemi Giordano; Laura Burattini; Agnese Sbrollini

15:45 *Fetal Heart Rate with Phono- and Electrocardiography (282)*
Dagbjört Helga Eiríksdóttir; Johannes Struijk; Henrik Zimmermann; Olav B Petersen; Cathrine Vedel; Francesco Renna; Samuel Emil Schmidt

16:00 *Sex- and Menopause-Specific ECG Repolarization Patterns (339)*
Angela Hernandez Mendoza; Josseline Nicole Madrid; Neurys Gomez; Carlos Sánchez; Patricia Munroe; Alejandro Sanz; Ana Mincholé; Julia Ramírez

Physionet Challenge (S64)
Tue, Sep 16 14:45-16:15 in room Pampa
Chairs: Gari Clifford, Matthew Reyna

14:45 *Open-Heart: Detection of Chagas Disease from Single-Lead Electrocardiogram (315)*
Edo Ikurumi

15:00 *Transformer–xLSTM Ensembles for ECG-based Chagas Disease Detection (236)*
Angus Nicolson; Riccardo Lunelli; Samuel Martin Proell; Nadja Gruber; Axel Bauer; Clemens Dlaska

15:15 *Fine-tuning a Pretrained ECG Foundation Model for Chagas Disease Detection (259)*
Yongchao Long; Jinshuai Gu; Mingke Yan; Deyun Zhang; Shijia Geng; Jun Li; qinghao zhao; Yuxi Zhou; Shenda Hong

15:30 *CardioRAG: A Retrieval-Augmented Generation Framework for Multimodal Chagas Disease Detection (283)*
Zhengyang Shen; Xuehao Zhai; Hua Tu; Mayue Shi

15:45 *A ResNet with CBAM Attention Module Ensemble to Detect Chagas Disease in the ECG: Age, Sex and Database Biases (285)*
Jorge Sanchez; Sandra Perez-Herrero; Jose Gallego Navarro; Guadalupe Garcia Isla

16:00 *Lightweight Deep Neural Network for Chagas Disease Screening Using 12-lead ECG signals (368)*
Quenaz Bezerra Soares; Diego A. Cardona Cardenas; Felipe Meneguitti Dias; Estela Ribeiro; Jose Krieger; Marco Antonio Gutierrez

Imaging (P7_1)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Safety Study of RF-induced Heating Near Cardiac Stents for 5T MRI System (9)*
Ao Shen; Mir Khadiza Akter; jianfeng Zheng; Ji Chen

16:15 *Cardiac Ultrasound Tomography Using Transducer With Sparse Elements and Anisotropic Regularization (97)*
Roberto Costa Ceccato; Chi-Nan Pai; Sergio Shiguemi Furuie

16:15 *Automated Left Ventricular Volume Estimation from CCTA Using TotalSegmentator: A Validation Against Cardiac MRI (152)*
Henrik P. Lind; Samuel Emil Schmidt; Simon Winther; Lasse Riis Ostergaard

16:15 *"AI-Driven Malignancy Detection in Cardiac Tumors via T1-Weighted MRI Imaging" (154)*
Meri Ferretti; Michele Pagliaccia; Andrea Baggiano; Gianluca Pontone; Francesco Angeli; Matteo Armillotta; Luca Bergamaschi; Luigi Lovato; Carmine Pizzi; Valentina Corino

Cardivascular Mechanics (P7_2)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Exploring Mechanisms in Responders to Medication in Pulmonary Hypertension (169)*
Malak Ismail Sabry; Ahmed Hassan; Florinda Dilger; Chiemeka Nwandu; Magdi H. Yacoub; Pablo Lamata; Adelaide De Vecchi

16:15 *Predicting the Left Ventricular Ejection Fraction Using Bimodal Cardiac Auscultation (137)*
Frederikke Thaarup Petersen; André Lobo; Cristina Oliveira; Cátia Isabel Costa; Ricardo Fontes-Carvalho; Samuel Emil Schmidt; Francesco Renna

16:15 *Development of a Functional Phantom with Dynamic Flow Control for Simulation of Cardiopathies in Ultrasonographic Evaluation (471)*
Millena Victoria Azevedo de Souza; Marcia Roberta souza; Fernanda Silva de Oliveira Vastag; valeria alves alencar; Luiz Carlos da Silva; Jeferson C. Dias

16:15 *Bayesian Calibration of Aneurysm Wall and Thrombus Material Properties in Patient-Specific Aortic Models (297)*
Gaia Caruso; Andrea Guala; Lydia Dux-Santoy; Estefania Peña; Miguel Angel Martinez; Sergi Bellmunt-Montoya; Marvin Ernesto Garcia-Reyes

Ventricular Arrhythmias (P7_3a)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Structural Remodeling Analysis of Induced Arrhythmias in Rabbit Heart (92)*
mouhamed zakiou kolawole A. Raimi; Saleem Ullah; Pamela Pinheiro Martins; Fernanda Fogaça Ruiz; Marcela Sorelli CARNEIRO-RAMOS; Silvia Honda Takada; Joao Salinet

16:15 *Identification of Arrhythmogenic Sites in Post-ischemic Ventricular Tachycardia Using Joint Time-Vertex Scattering Transform (232)*
Lucas Zoroddu; Thomas Demarcy; Laurent Oudre; Pierre Humbert; Francis Bessiere

16:15 *The Unipolar Electrogram Downslope as a Marker of Scar and Slow Conduction in Ventricular Tachycardia (342)*
Manisha Sahota; Ursula Rohrer; Fernando Campos; Iulia Nazarov; Sri Kousthubha Allampalli; Janneke Burger; Luca Azzolin; Aurel Neic; Ronak Rajani; Pranav Bhagirath; Gernot Plank; Steven E. Williams; steven niederer; Matthijs Cluitmans; John Whitaker; Martin Bishop

16:15 *Automatic Onset Detection of Abnormal Ventricular Potentials by Time-Frequency Analysis (346)*
Marco Orrù; Nicla Mandas; Giulia Baldazzi; Graziana Viola; Danilo Pani

16:15 *Is it Possible to Stimulate an Isolated Heart in Multiple Directions Using Only Two Pairs of Electrodes? (371)*
Lizandra A. Sa; Jorge Augusto Costa; Lindemberg Silveira Filho; Pedro Xavier Oliveira

Machine Learning and AI in ECG Analysis (P7_4a1)

Tue, Sep 16 16:15-17:45 in room Pantanal

Poster session

16:15 *Spiking QRS Detector: Adaptive Homeostatic Modulation for Continual Unsupervised Learning (12)*
Kaveh Samiee

16:15 *ECG Morphology Representational Learning and Decomposition Via An Adaptive Legendre Mixture Model Variational Autoencoder (13)*
Kaveh Samiee

16:15 *Enhanced ECG Classification Using Dual-Lead Gramian Angular Field Transformation and Deep Learning (49)*
Giwon Yoon; Segyeong Joo

16:15 *Combined Convolutional Neural Network-Transformer Network with Hand-Crafted Features for Imbalanced Multi-label 12-lead ECG Classification (268)*
Tianshi Xie; Poulomi Pal; Elaine Chew

16:15 *Clinically Interpretable Zero-Shot ECG Classification via Multimodal Learning and Expert-Aligned Descriptors (379)*
Luiz Facury de Souza; Jose Geraldo Fernandes; Pedro Robles Dutenhefner; Turi Vasconcelos Rezende; Gisele Pappa; Gabriela Paixão; Antonio Luiz Ribeiro; Wagner Meira Jr

16:15 *Addressing Explainability, Transparency and Interpretability Requirements of AI Models for ECG Analysis (387)*
Durande K. Nguifo; Gabriel Tozatto Zago; Rafael Pereira; Rodrigo Varejao Andreao; Anthony Fleury

16:15 *Explainable Multimodal Fusion with Vision Transformer and Wave2Vec for ECG-Based Chagas Disease Detection (456)*
Aditya Nagori; Junseob Kim; Tilendra Choudhary

16:15 *Diagnostic ECG Classification of Myocardial Infarction and ST-T Changes Using Machine Learning via 3D Vectorcardiogram Data (185)*
Lucenildo Silva Cerqueira; Jurandir Nadal

ECG-based Arrhytymia Detection (P7_4a2)

Tue, Sep 16 16:15-17:45 in room Pantanal

Poster session

16:15 *Deep Learning Approach for Binary Classification of 12-Lead ECGs in Chagas Disease Detection (425)*
Arian Villalba Tapia; Jose Adrian Chavez-Olvera; Blanca Tovar-Corona; Rene Luna-Garcia

16:15 *Classification of Persistent Atrial Fibrillation Targets Using Machine Learning on Multipolar Electrograms (437)*
Rafael Costa de Almeida; Douglas Almonfrey; Vicente Zarzoso; Fabien Squara

16:15 *Cardiac Arrhythmia Detection Based on R-Peak Centered Segments of ECG Signals Using 1D Convolutional Neural Networks and Explanation Using Grad-CAM Tool (63)*
Aris Souza Canto; Francisco Assis Pereira Januário; Marly Guimaraes Fernandes Costa; Cicero Ferreira Fernandes Costa Filho

16:15 *A Software Platform for Comparative Analysis of Vectocardiograms in Pacemaker and CRT Optimization (64)*
Renata Valeri de Freitas; Carlos Eduardo Duarte; Fred Schinke; Percival Gomes Netto

16:15 *Characterization of QRS Rotation Direction Changes in Frank Vectorcardiograms (65)*
Beatriz Rangel Tapia; Gustavo Yeh Fuzinato; Nelson Samesima; Henrique Takachi Moriya; Renata Valeri de Freitas

16:15 *DynaECG-Net: Dynamic Margin Metric Learning for Arrhythmia Classification Using Single-Lead Electrocardiogram (226)*
Amnah Nasim; Taesik Go

BSPM & ECGI (P7_4b)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Meta-learning based Active Learning Approach for Computer-Assisted Pace-Mapping (67)*
Pradeep Bajracharya; Dylan B. O'Hara; Casey Meisenzahl; Karli Gillette; Anton J. Prassl; Gernot Plank; John L. Sapp; Linwei Wang

16:15 *AI-Assisted Pace-Mapping using Continual-Learning Methods in Bayesian Optimization (76)*
Dylan B. O'Hara; Pradeep Bajracharya; Casey Meisenzahl; Karli Gillette; Anton J. Prassl; Gernot Plank; John L. Sapp; Linwei Wang

16:15 *Synthetic EGM Generation with Variational Autoencoders (284)*
Miriam Gutiérrez Fernández-Calvillo; Karen Lopez Linares; Carlos Fambuena Santos; Maria de la Salud Guillem Sánchez; Andreu M. Climent; Oscar Barquero-Perez

Modeling atrial electrophysiology and fibrillation (P7_51)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Evaluation of Modelling Methods for Electrocardiographic Fibrillatory Waves in Atrial Fibrillation (45)*
Jakub Grzelak; Shaheim Ogbomo-Harmitt; Andrew King; Oleg Aslanidi

16:15 *Modelling the Impact of Patient-Specific Fibrosis and Anatomy on AF Triggered by Pulmonary Vein Ectopy (141)*
Cynthia Nwanna; Semhar Biniam Misghina; Caterina Vidal Horrach; Ovais Ahmed Jaffery; Laura Bevis; Mahmoud Ehnesh; Thomas Iskratsch; Andrew Tinker; Shohreh Honarbakhsh; Caroline H. Roney

16:15 *Atrial Fibrillation Biomarker Prediction to the Personalization of Electrophysiological Models (264)*
Pedro de Luna; María Termenón Rivas; Giada Sira Romitti; Duna De Luis Moura; Miguel Rodrigo; Alejandro Liberos

16:15 *Personalised models of atrial propagation fitted to clinically-induced activation maps (276)*
Duna De Luis Moura; Chiara Celotto; SeyedSaman Golmaryami; María Termenón Rivas; Giada Sira Romitti; Etel Silva Garcia; Juan Fernandez-Armenta; Jose F Rodriguez Matas; Alejandro Liberos; Miguel Rodrigo

Clinical applications of cardiac modeling (P7_52)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Modeling the Electrophysiological Impact of Chagas Disease on the Heart (209)*
Angela M. Gómez; Catalina Tobon; Juan P Ugarte; Javier Saiz

16:15 *Comparing Surrogate Models for Action Potential Features in Ischemic Conditions (221)*
Yan B. Werneck; Lucas Teixeira Oliveira; Rodrigo Weber dos Santos; Bernardo Martins Rocha; Kevin Burrage; Anders Nygren; Brodie Lawson; Joventino de Oliveira Campos

16:15 *Evaluation of Uncertainty in Damage Induced by Cardiac Cryoablation for the Treatment of Arrhythmias (413)*
Davi Luis de Faria Rocha; Ruy Freitas Reis

16:15 *AdaINR: Locally Adaptive Implicit Neural Representation of Diffusion Currents for Mechanistic Electrophysiology Simulations (419)*
Sumeet A. Vadhavkar; Linwei Wang; Stephanie Appel; Cristian Alberto Barrios Espinosa; Axel Loewe; Casey Meisenzahl

16:15 *A Novel Ventricular Digital Twin: Modeling Transmural Scar Heterogeneity and Purkinje–Myocardial Junction (149)*
Fuyu Cheng; Johanna Tonko; Elisa Rauseo; Semhar Biniam Misghina; Carlos Edgar Lopez Barrera; Masimba Nemaire; Edward Vigmond; Gregory Slabaugh; Nay Aung; Pier Lambiase; Steffen E. Petersen; Caroline H. Roney

Photoplethysmography (P7_61)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Movement Artifacts Reduction from PPG Signals Using Learned Convolutional Sparse Coding (43)*
Giulio Basso; Xi Long; Reinder Haakma; Rik Vullings

16:15 *Normalization of the Photoplethysmographic Signal using the Post-extrasystolic Potentiation (115)*
Roel J. H. Montree; Elisabetta Peri; Lukas Dekker; Xi Long; Reinder Haakma; Rik Vullings

16:15 *Improving Photoplethysmography Peak Detection through Higher-Order Interpolation Techniques (187)*
Maissa Maniezzo; Arthur Valencio; Italo Sandoval Ramos de Oliveira; Rafael Lima

16:15 *Cluster-Based Motion Artifact Filtering for Enhanced PPG Noise Reduction in Wearable Health Monitoring (341)*
Matteo Ricci; Daniel Suarez; Vicente Bertomeu Gonzalez; Arturo Martinez-Rodrigo; Raul Alcaraz; Jose J Rieta

16:15 *Image-Based Analysis of Pulse Wave Signals Using Convolutional Neural Networks for Age Classification (343)*
Sara Vardanega; Patrick Segers; Philip Aston; Ernst Rietzschel; Jordi Alastruey; Manasi Nandi

16:15 *PPG Foundation Models, Morphological Features and Hypertension and Diabetes in 215,000 Subjects (362)*
George Searle; Stefan van Duijvenboden; Julia Ramírez; Andrew Tinker; Patricia Munroe; Pier Lambiase; Alun Hughes; Michele Orini

16:15 *OpenPPG: Research Mobile App for PPG Waveform Acquisition using Smartphone Camera with Raw Data Access (407)*
Mateusz Solinski; Mikolaj Basza; Bartosz Pietyra; Marta Szkwyra

16:15 *Phenotyping Cardiovascular Patients via PPG Signal Clustering Using Symmetric Projection Attractor Reconstruction (SPAR) (420)*
Mikolaj Basza; Mateusz Solinski; Weronika Kowalczyk; Damian Waląg; Lukasz Koltowski

16:15 *Decoding Stress Dynamics: Leveraging Recurrent Auto-Encoders for Adaptive Health Monitoring Using PPG Wearable Device (422)*
Ahmad Daoud Ahmad Ramahi; Abubakar Sadiq Muhammad; Mohammed Osama Alghwell; Abdulhamed Mohammed Jasim; Taher Biala

16:15 *Peakwise Correlation Pulse Detector: A Novel Method for Noise-Resilient Peak Detection in PPG signals (350)*
Pietro Chierico; Daniel Suarez; Vicente Bertomeu Gonzalez; Arturo Martinez-Rodrigo; Raul Alcaraz; Jose J Rieta

System study and Heart rate Variability (P7_7)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Cardiac Autonomic Function and Pulmonary Function in Hypertensive Individuals Post Mild COVID-19: A Cross-Sectional Study (378)*
Ádrya Aryelle Ferreira; Raphael Martins de Abreu; Pedro I. L. Roriz; Joice De Souza Batista; Camila Almeida SA; Matheus Sobral Silveira; Antônio Marconi Leandro da Silva; Gerlene Grudka Lira; Tereza Aparecida Costa Braga; Paulo Adriano Schwingel; Armele Dornelas de Andrade; Fabianne Mdna Dantas; Victor Ribeiro Neves

16:15 *Assessing Signal Quality Impact on Pulse Rate Variability Accuracy from Photoplethysmography (281)*
Nayan Wadhwani; Pablo Armañac-Julián; Raquel Bailón; Eduardo Gil

16:15 *Entrainment of Autonomic Rhythms to Musical Structure: Re-visiting and Extending Bernardi et al. (2009) (316)*
Natalia Cotic; Vanessa Clare Pope; Michele Orini; Pier Lambiase; Elaine Chew

16:15 *Information-Theoretic Characterization of Short-Term Heart Rate Variability in Ischemic and Non-Ischemic Heart Failure Patients During Exercise (134)*
Salvatore Castelbuono; Laura Sparacino; yuri antonacci; Luca Faes

16:15 *Federated Multi-Task Learning for Cross-Dataset Sleep Staging and Sleep-Disordered Breathing Severity Classification (7)*
songlu lin; Yuzhe Wang; Zhihong Wang

16:15 *Decomposition Of The Dynamic Information Shared In Complex Networks Of Physiological Variables (39)*
Laura Sparacino; Chiara Bara'; yuri antonacci; Michal Javorka; Luca Faes

16:15 *Net Synergy/Redundancy Balance of Cardiovascular Interactions Allows the Stratification of the Risk in Patients with Asymptomatic Carotid Stenosis (41)*
Vlasta Bari; Beatrice Cairo; Nicoletta Curcio; Michele Conti; Rosanna Cardani; Laura Valentina Renna; Giacomo Dell'Antonio; Giulia Matrone; Paolo Righini; Giovanni Nano; Daniela Mazzaccaro; Alberto Porta

16:15 *Spatial Robustness Analysis of a Single-Lead ECG Algorithm for Breathing Rate Estimation (357)*
Amael Mombereau; Vladimir Sobota; Carmen Martinez Anton; Remi Dubois; Michel Haissaguerre; Kanchan Kulkarni; Laura R. Bear

Physionet Challenge (P7_8)
Tue, Sep 16 16:15-17:45 in room Pantanal
Poster session

16:15 *Detecting Chagas Disease Using a Vision Transformer-based ECG Foundation Model (19)*
Lore Van Santvliet; Phu Xuan Nguyen; Bert Vandenberk; Maarten De Vos

16:15 *Feature-Reduced Ensemble Model for ECG-Based Chagas Disease Diagnosis (27)*
sanghyun ham; eunseo choi

16:15 *Novel N-BEATS Architecture for Classification of Chagas Disease (35)*
Bartosz Paweł Puszkarski; Krzysztof Hryniów; Marcin Iwanowski

16:15 *Detecting Chagas Disease from the ECG with Sharpness Aware Minimization and Domain Adversarial Learning (37)*
Jad Haidamous; Philip Hempel; Maurice Rohr; Tizian Claus Dege; Marcus Vollmer; Nicolai Spicher; Christoph Hoog Antink

16:15 *A Deep Learning Framework for Chagas Disease Detection Using CNN-Transformer Architecture on 12-Lead ECGs (48)*
Kyung Min Choi; Giwon Yoon; Segyeong Joo

16:15 *Machine Learning for Chagas Disease Detection Using Electrocardiogram Signals (59)*

Higor Barreto Campos; Mariana da Palma Valério; Felipe Gomes Amorim; Eduardo Darwich DA Rocha Moura; Guilherme Almeida Laurentino; Samuel Minucci Camargo; stella tassinari maximo; Alessandro Pereira da Silva; Daniel Gustavo Goroso; Fabiano Bezerra Menegidio

16:15 *Wavelet-Derived Entropy and Complexity Biomarkers for ECG-Based Detection of Chagasic Cardiomyopathy (61)*
Gisela Vanesa Clemente; Leandro Andrini; Mariano Llamedo Soria

16:15 *One-Dimensional ConvNeXt for Chagas Disease Screening from 12-lead ECGs (77)*
Elaine Li

16:15 *Reliable Pseudo-Labeling for semi-supervised Chagas Diagnosis from Noisy-Labeled ECG (81)*
Weifeng Liu; Qiu Miaohan; Li Jing; Li Yi; Han Yaling

16:15 *CNN-Based Chagas Disease Detection with 12-lead ECG (86)*
Shyamal Y. Dharia; Mahdis Hojjati; Sayed Saminur Rahman; Mir Md Taosif Nur; Camilo Valderrama

16:15 *Domain-Adversarial Pretrained Encoder for ECG-Based Chagas Disease Screening (91)*
Tianzheng Dong; Xinqi Bao; Jia Bi; Saikat Chatterjee

16:15 *ChagaL: Low-Rank Adaptation to Detect Chagas Diseease from Electrocardiograms (108)*
Pierre Gabriel Aublin; Stephanie Gladys Kühne; Sebastian Zaunseder; Dario Bongiovanni

16:15 *Semi-supervised Noise Label Learning On 12-lead ECG Records For Chagas Disease Detection (110)*
Chen Hao; Jiang Songtao; Hui Fang; Yu Chen; Baotong Liu; Jing Qin; Lu Liu

16:15 *Predicting Chagas Disease from ECGs Using Simulator-Augmented DNN-Derived Abnormality Scores (125)*
Yuta Hashimoto; Naoki Nonaka; Jun Seita

16:15 *Sequential Deep Learning for Chagas Disease Screening: A CNN-BiLSTM Approach with an Attention Mechanism (126)*
Saber Jelodari Mamaghani; Adam Bokun; Heike Leutheuser

16:15 *Masked Modelling is all you need for Electrocardiogram Signals (129)*
Gouthamaan Manimaran; Sadasivan Puthusserypady; Maria Helena Dominguez; Jakob Eyvind Bardram

16:15 *Effective Chagas Serological Test Prioritization via Optimized Feature-Based Gradient Boosting (130)*
Vinayaka Vivekananda Malgi; Sunil Aryal

16:15 *Classification of Chagas Disease Using Convolutional Neural Network and Random Forest (144)*
Noor Qaqos; Ekenedirichukwu Nelson Obianom; Shamsu Idris Abdullahi; Fan Feng; Abdulhamed Mohammed Jasim; Zaid A. Abod; Abdulmalik Koya; G. Andre Ng; Xin Li

16:15 *LA-ECGNet: Lead-Aware Self-Supervised Deep Learning for Chagas Disease Detection from 12-Lead ECGs (167)*

Ganesh Paramasivam; Abhishek Gupta; Mukund A Prabhu

16:15 *Using sparse Gaussian Process Regression to detect Chagas Disease from 12-lead ECG (174)*
Simoni Mishra; Sanjeev Bhavnani; Vinay Pai; Jun Beom Park; John Metzcar

16:15 *Hybrid Convolution-Transformer Network Integrating Time and Frequency Domains from 12-Lead ECG for Chagas Disease Detection (191)*
Hyeon Woo Lee; Junmo An

16:15 *Vector Signals from the Heart: A Foundation Model Approach to Chagas Detection (219)*
Sehun Kim

16:15 *Learning from Leads: A 1D Dilated ResNet for ECG Chagas Disease Screening (408)*
Somesh Saini; Matheus Araujo

16:15 *ResNet-BiGRU with Conditioned Query-Based Cross-Attention and Weighted Loss for Automated Chagas Disease Detection from 12-Lead ECG (475)*
Hyuno Im; Nahyun Lee; TaeYoung Kang; Kim TaeHwan; Donggun Kim; Donggyu Lee; Seungsang Oh; Wuming Gong; Il-Youp Kwak

16:15 *ECG-Based Chagas Disease Detection via Multi-Domain Feature Extraction and Ensemble Learning Techniques (224)*
Antonio Guilherme Cunha Santos; João Paulo do Vale Madeiro; Léo Vitor Ribeiro; Weslley Lioba Caldas

16:15 *Ensemble Learning with Early Fusion of Kernel-Transformed and Classical Electrocardiogram Features for Chagas Disease Detection (80)*
Victor M. Li; Runze Yan; Alex Fedorov; Jiaying Lu

Wednesday, September 18

Innovative Approaches to Understanding and Treating Atrial Fibrillation: Bridging Clinical Practice, Computational Modeling, and Advanced Imaging (S81)

Wed, Sep 17 08:30-10:00 in room Amazônia

Chairs: Axel Loewe, Jichao Zhao

08:30 *Computational Modelling and Simulation of Cardiac Function Now and Then: Revisiting Tools and Visions from the Beginning of the Century (10)*
Axel Loewe

09:00 *Electrical vs. Optical Mapping and Processing: Advancing Arrhythmia Characterization (450)*
Joao Salinet

09:15 *Simultaneous Atrial Mapping: End of an Era or Promising Future? Insights from Non-contact Mapping Integrated with Frequency, Phase, and Machine Learning Approaches to Identify Drivers from Clinical Data (22)*
Xin Li

09:30 *Prediction of Atrial Fibrillation Termination by Ablation with Imageless ECGI Mapping (478)*
Till Althoff; Ines Llorente; Ismael Hernández-Romero; Marta Martínez Pérez; Santiago Ros; Jana Reventós Presmanes; Adriana Costafreda; Ángel Arenal; Maite Izquierdo de Francisco; Ivo Roca Luque; Joaquín Osca Asensi; Lluis Mont; Andreu M. Climent; Maria de la Salud Guillem Sánchez; Felipe Atienza

Cardiovascular and Cardiorespiratory Variability (S82)
Wed, Sep 17 08:30-10:00 in room Cerrado
Chairs: Alejandra Guillén-Mandujano, Elaine Chew

08:30 *Assessment of autonomic dysregulation in sepsis and sinoartic denervation by analysis of cardiovascular variability and complexity (198)*
Gustavo Henrique de Almeida; Federico Aletti; Camila Molina Soares; Maria Claudia Irigoyen

08:45 *The Complex Interpretation of Heart Rate Variability Components in Mechanically Ventilated Patients (251)*
Sofia Perez-Gracia; Pablo Armañac-Julián; Alba Martin; Josefina López Aguilar; Francesc Suñol Galofre; Candelaria de Haro; Leonardo Sarlabous; Rafael Fernández; Montserrat Batlle Solà; Lluís Blanch; Raquel Bailón

09:00 *Autonomic Dysfunction in Long COVID: Correlations Between Blood Pressure and Heart Rate Variability in Tilt Testing (78)*
Samuel Minucci Camargo; Christian Goncalves Sassaki; Ana Leticia Gomes dos Santos; Stella Tassinari Maximo; Kelly Correa Baioco Da Silva; silvia helena bastos de paula; Jose L. Puglisi; Daniel Gustavo Goroso

09:15 *The Time Courses of the Spectral Components of Pulse Pressure and the Maximal First Derivative of Arterial Pressure are Similar in the Cold Face Test and Indicate the Sympathovagal Coactivation it Elicits (30)*
Salvador Carrasco-Sosa; Aldo Rodrigo Mejía-Rodríguez; Alejandra Guillén-Mandujano

09:30 *Cardiac and Sympathetic Baroreflex Sensitivity Is Not Affected by Transcutaneous Vagus Nerve Stimulation in Hyperadrenergic Postural Tachycardia Syndrome (71)*
Beatrice Cairo; Vlasta Bari; Beatrice De Maria; Chiara Arduino; Stefano Rigo; Dana Shiffer; Surat Kulapatana; André Diedrich; Italo Biaggioni; Raffaello Furlan; Alberto Porta

09:45 *Music-based Graph Attention Network using ECG and Respiration signals to Predict Systolic and Diastolic Blood Pressure (364)*
Poulomi Pal; Pier Lambiase; Elaine Chew

Multimodal and Physiological Integration (S83)
Wed, Sep 17 08:30-10:00 in room Caatinga
Chairs: Rob MacLeod, Fernando Moura

08:30 *Predicting Frailty using Motor and Heart Rate Interconnection: Application of Convergent Cross Mapping to Identify Autonomic Dysfunction (182)*
Mohammad Hosseinalizadeh; Kubra Akbas; Saman Parvaneh; Nima Toosizadeh

08:45 *Cardiotocography Modeling via Transfer Entropy Bottleneck to Predict Intrapartum Fetal Deterioration (200)*
Mahdi Shamsi; Michael William Kuzniewicz; Marie-Coralie Cornet; Yvonne W. Wu; Lawrence David Gerstley; Robert E. Kearney; Philip Warrick

09:00 *Unsupervised ECG Clustering Reveals Distinct Associations with Cardiac Magnetic Resonance Features (384)*
Josseline Nicole Madrid; Mihir Sanghvi; William Young; Stefan van Duijvenboden; Patricia Munroe; Julia Ramírez; Ana Mincholé

09:15 *Quantifying APD–ARI Differences Across Endo-Epicardial Surfaces in Human and Porcine Hearts (218)*
Jimena Gabriela Siles Paredes; Casey Lee-Trimble; Evan H. Rheaume; Shahriar Iravanian; Flavio Fenton; Joao Salinet; Ilija Uzelac

09:30 *Advancing Medical Decision-Making through Human-AI Collaboration (355)*
Marc Goutier; Tizian Claus Dege; Maurice Rohr; Alexander Benlian; Christoph Hoog Antink

09:45 *A Comparative Study of Clinical Rule-Based and Deep Learning-Based Diagnosis for Myocardial Infarction Detection from Electrocardiograms (440)*
Silvia Ibrahimi; Massimo W Rivolta; Roberto Sassi

Cardiac and Hemodynamics modeling (S84)
Wed, Sep 17 08:30-10:00 in room Pampa
Chairs: Danilo Pani, João Lameu

08:30 *1D Model of Arterial Haemodynamics in Lower-Limb with Profunda Femoris Collateral Pathway, with A Case Study in Peripheral Artery Disease (133)*
Mia Wan; Adam Geale; Pablo Lamata; Hany Zayed; Jordi Alastruey

08:45 *A Standardised Pipeline for Patient-Specific Aortic Flow Modelling: Turbulent Flow Patterns in TAVI (208)*
Laura Bevis; Elias Karabelas; Elisa Rauseo; Abbas Khan Rayabat Khan; Xu Chen; Richard Burns; Kush Patel; Yousaf Bhatti; Steffen E. Petersen; Christoph Augustin; Aurel Neic; Gernot Plank; Gregory Slabaugh; Anthony Mathur; Caroline H. Roney

09:00 *Patient-Specific CFD of Right Ventricular-Pulmonary Artery Dynamics in Pulmonary Hypertension: Joint Motion Tracking and Tuned Windkessel Modelling using 4D Cardiac CT (323)*

Abhijit Adhikary; Pablo Lamata; Adelaide De Vecchi

09:15 *Comparison of Finite Element Approximations for Electro-Mechanical Models of the Human Heart (313)*
Laura Stengel; Christian Wieners; Jonathan Krauss; Axel Loewe

09:30 *Emulation of Cardiac Mechanics using E(3) Equivariant Graph Neural Networks (157)*
Adrien Pinard; Zhinuo Jenny Wang; Ambre Bertrand; Blanca Rodriguez; Julia Camps

09:45 *Beyond Static Geometries: A Novel Dynamic 3D Hemodynamic Model of Left Atrium for Personalized Cardiovascular Risk Assessment (73)*
Joao Lameu; João Gabriel Buso Torro; Rodrigo de Lima Amaral

Atrial Arrhythmias (S91)
Wed, Sep 17 10:30-12:00 in room Amazônia
Chairs: Ismael Hernández, Adrian Luca

10:30 *P-Wave Morphological Variability Exacerbation Prior to Atrial Fibrillation Episodes (84)*
Maikel Noriega; Alba Martin; Aleksei Savelev; Pyotr Platonov; Javier Marta; Monika Butkuvienė; Juan Pablo Martínez; Pablo Laguna

10:45 *Improving the Identification of Fractionated Atrial Electrograms Using Omnipolar Technology (327)*
Raul Alos; Jakub Hejc; Elisa Ramirez; Martin Pesl; Zdenek Starek; Francisco Castells; Jose Millet

11:00 *Characterization of Regional Conduction Velocity During Atrial Fibrillation in High and Low Spatial Resolution Intracavitary Recordings (289)*
María Termenón Rivas; Giada Sira Romitti; Duna De Luis Moura; Sanjiv Narayan; Alejandro Liberos; Miguel Rodrigo

11:15 *A Digital Twin Framework with Synthetic Ablation and Electrogram Classification for Ablation Guidance (438)*
Rafael Costa de Almeida; Douglas Almonfrey; Vicente Zarzoso

11:30 *Spatial Variability of Catheter Positions Affects Omnipolar Mapping in 2D Atrial Sheet Simulations (381)*
Joachim Kröner; Francesco Maffezzoli; Roberto Sassi; Massimo W Rivolta

11:45 *Wavelet Scattering Transform for Enhancing ablation Outcomes in Human Persistent Atrial Fibrillation (88)*
Noor Qaqos; Ekenedirichukwu Nelson Obianom; Abdulhamed Mohammed Jasim; Shamsu Idris Abdullahi; Fan Feng; Fernando Soares Schlindwein; G. Andre Ng; Xin Li

Heart Rate variability Applications (S92)
Wed, Sep 17 10:30-12:00 in room Cerrado
Chairs: Alfredo Hernández, Riccardo Barbieri

10:30 *Autonomic Function Analysis in Patients with Chronic Heart Failure with Reduced and Preserved Ejection Fraction (258)*
Raphael Martins de Abreu; Beatrice Cairo; Vlasta Bari; Giulia Paglione; Beatrice De Maria; Francesco Bandera; Massimo Francesco Piepoli; Alberto Porta

10:45 *Markov Transition Matrix Analysis Reveals Age-Dependent Patterns in Symbolic Heart Rate (107)*
Namareq Widatalla; sona alyounis; Ahsan Khandoker

11:00 *Impact of Night Shift Work Routine on Cardiac Autonomic Control in Nursing Professionals (411)*
Victor Ribeiro Neves; Gerlene Grudka Lira; Camila Almeida SA; Abilene Pinheiro Silva; Ádrya Aryelle Ferreira; Pedro I. L. Roriz; Matheus Sobral Silveira; Fabianne Mdna Dantas; Francisco Locks

11:15 *Frailty Assessment using HRV During Physical Activity (203)*
Saman Parvaneh; Sadaf Moharreri; Nima Toosizadeh; Shahab Rezaei

11:30 *Heart Rate Variability Assessment via Smartwatch Detects Autonomic Dysfunction in Long COVID (79)*
Stella Tassinari Maximo; Samuel Minucci Camargo; Ana Leticia Gomes dos Santos; Kelly Correa Baioco Da Silva; silvia helena bastos de paula; Jose L. Puglisi; Petronio Cabral Ferreira; Daniel Gustavo Goroso

11:45 *Machine Learning Approaches for Predicting Depression and Anxiety in Post-Myocardial Infarction Patients: Insights from Heart Rate Variability and Clinical Factors (353)*
Luana Lorena Moreira; Marcelle Sá Machado Araujo; Lucas Salgado Mendonça; jasjr20@yahoo.com.br Antonio Silva Jr; Ovidiu Constantin Baltatu; Luciana Aparecida Campos

Clinical ECG Applications (S93)
Wed, Sep 17 10:30-12:00 in room Caatinga
Chairs: Jean-Philippe Couderc, Alba Martín Yebra

10:30 *Curved Spaces, Enhanced Diagnosis: Hyperbolic Neural Networks for Multi-label ECG Classification (444)*
Pedro Robles Dutenhefner; Diogo Tuler Chaves; Turi Vasconcelos Rezende; Jose Geraldo Fernandes; Luiz Facury de Souza; Luísa Gontijo Porfírio; Yan Aquino Amorim; Arthur Buzelin; Pedro Bento; Gabriela Paixão; Gisele Pappa; Antonio Luiz Ribeiro; Wagner Meira Jr

10:45 *Hemodynamic Behaviour During Tilt Test in Patients with Long COVID (434)*
Ana Leticia Gomes dos Santos; Christian Goncalves Sassaki; stella tassinari maximo; Beatriz Oliveira Machado; Kelly Correa Baioco Da Silva; Samuel Minucci Camargo; Rodrigo O. Marañón; Jose L. Puglisi; Daniel Gustavo Goroso

11:00 *Predicting Ventricular Arrhythmia in Myocardial Ischemia Using Machine Learning (5)*

Anna Busatto; Jake Bergquist; Tolga Tasdizen; Benjamin A. Steinberg; Ravi Ranjan; Rob MacLeod

11:15 *Deep Learning for Amplified P-Wave Duration Annotation (175)*
Silvia Becker; Ajay Krishna; Axel Loewe; Martin Eichenlaub

Cardiac Mechanics and Heart Failure (S94)
Wed, Sep 17 10:30-12:00 in room Pampa
Chairs: Laura Burattini, Filip Plesinger

10:30 *Personalized Cardiac Mechanics Simulations of a Patient with Non-ischemic Dilated Cardiomyopathy (143)*
Joventino de Oliveira Campos; Daniel Keim Almeida; Thaiz Ruberti Schmal; Marcelle Cristina da Silva Bastos Vasconcelos; Rodrigo Weber dos Santos; Bernardo Martins Rocha

10:45 *Establishing a Mechanical Homeostatic State in the Cardiac System to study Growth and Remodeling of the Myocardial Tissue (405)*
Teresa Diaz Jorda; Shaiv Parikh; Martin R. Pfaller; Marcos Latorre

11:00 *Impact of the Left Atrium Morphology on Hemodynamics in Atrial Fibrillation: A Computational Fluid Dynamics Study (85)*
João Gabriel Buso Torro; Rodrigo de Lima Amaral; Joao Lameu

11:15 *Instantaneous phase maps in cardiac arrhythmias: comparison between sinusoidal recomposition and Hilbert transform (231)*
Giovanni Viriato Critelli; Jimena Gabriela Siles Paredes; Tainan Cerqueira Neves; Saleem Ullah; Angélica Drielly Quadros; Jose Carlos Gomes Junior; Joao Salinet

11:30 *When Extra is not Extra: Heartbeat Irregularities and All-cause Mortality in Heart Failure Patients (272)*
Filip Plesinger; Zuzana Koscova; Radovan Smisek; Veronika Bulkova; Ivo Viscor; Pavel Jurak

11:45 *Mechanistic Characterization of Cardiac Arrhythmia from Electrical and Optical Mapping in Langendorff-Perfused Rabbit Hearts (95)*
Saleem Ullah; Giovanni Viriato Critelli; Angélica Drielly Quadros; Jimena Gabriela Siles Paredes; Ilija Uzelac; Joao Salinet

Imaging (PA_1)
Wed, Sep 17 12:30-14:00 in room Pantanal
Poster session

12:30 *Spatial Correlation Communities in Panoramic Optical Mapping (162)*
Estela Sánchez-Carballo; Francisco-Manuel Melgarejo-Meseguer; Jimena Gabriela Siles Paredes; Saleem Ullah; Angélica Drielly Quadros; Joao Salinet; Jose Luis Rojo-Alvarez

12:30 *From Snapshots to Motion: Principal Component Analysis Based Temporal Modelling of Cardiac Shape in Myocardial Infarction (211)*
Thalia Seale; Vicente Grau; Abhirup Banerjee

12:30 *Estimating Septum Rotation to Improve Accuracy of Cardiac Biventricular Bullseye Representation Using the UNISYS Algorithm (348)*

Nicolas Montagne; Amael Mombereau; Olivier Bernus; Laura R. Bear

12:30 *Leveraging Pre-trained Vision Foundation Models for Robust Left Atrium Segmentation from Cardiac MRI (394)*
Bipasha Kundu; Cristian Linte

Cardivascular Mechanics (PA_2)
Wed, Sep 17 12:30-14:00 in room Pantanal
Poster session

12:30 *Explainable AI for Cardiorenal Insights: Linking ECG Features to Kidney Function Decline in a Heart Failure Cohort (123)*
sona alyounis; Namareq Widatalla; Amna Samjeed; Ahsan Khandoker

12:30 *Advanced Haemodynamic Modelling of Transcatheter Aortic Valve Implantation: Insights into Leaflet Thrombosis and Blood Flow Dynamics (186)*
Maria Isabel Pons Vidal; Harriet Hurrell; Tiffany Patterson; Jack Lee

12:30 *Identification of Importance of Heart Failure Diagnostic Features in Simultaneous Electrocardiogram and Photoplethysmogram Recordings (319)*
Masa Tiosavljevic; Predrag Tadić; Arsen D. Ristic; Vladan D. Vukcevic; Jovana Petrovic

12:30 *Computational Assessment of Coronary Stent Performance: Structural and Hemodynamic Analysis (377)*
Alex Cavalcante DE Figueiredo; Ronny Calixto Carbonari; Sônia Maria Malmonge; Joao Lameu

12:30 *Characterizing the Conduction Substrate of Dyssynchrony via Optical and Pseudo-Surface Mapping in Ex Vivo Human Hearts (421)*
Ilija Uzelac

12:30 *Intelligent Remote Monitoring and Control System for VADs with Detection and Response to Critical and Catastrophic Failures (469)*
Jeferson C. Dias; Millena Victoria Azevedo de Souza; Luiz Carlos da Silva; Jonatas C. Dias

Atrial Arrhythmias (PA_3b)
Wed, Sep 17 12:30-14:00 in room Pantanal
Poster session

12:30 *Enhancing the Prediction of Ablation Outcomes Using Transfer Learning on Residual Network via Spectrogram in Persistent Atrial Fibrillation (89)*
Noor Qaqos; Abdulhamed Mohammed Jasim; Ekenedirichukwu Nelson Obianom; Shamsu Idris Abdullahi; Fan Feng; Fernando Soares Schlindwein; G. Andre Ng; Xin Li

12:30 *Impact of AF Ablation Strategies on Autonomic Modulation Measured by Heart Rate Variability (257)*

Andrea Rucco; Juan Pablo Martínez; Adrián Hernandez; Marcos Echevarría Polo; Pablo Vadillo Martin; Nuria Garatachea; Pablo Laguna; Javier Ramos-Maqueda; Esther Pueyo

12:30 *Characterization of Atrial Spatiotemporal Dynamics for Prediction of Atrial Fibrillation Recurrence after Ablation (260)*
Hugo Hernández; Carlos Sánchez; Ana Mincholé; Jorge Melero-Polo; Javier Ramos-Maqueda; Juan Pablo Martínez; Esther Pueyo

12:30 *Minimum Time Duration for Detecting Phase Singularities in Human Persistent Atrial Fibrillation (340)*
Shamsu Idris Abdullahi; Noor Qaqos; Ekenedirichukwu Nelson Obianom; Fan Feng; Abdulhamed Mohammed Jasim; G. Andre Ng; Xin Li

12:30 *Extended Single-Lead ECG Monitoring for AF Detection Using Deep Learning (380)*
Casey Meisenzahl; Xiaojuan Xia; Gill R. Tsouri; Linwei Wang; jean-philippe couderc

12:30 *Generation of Realistic Synthetic Electrograms for Atrial Fibrillation Analysis (436)*
Rafael Costa de Almeida; Douglas Almonfrey; Vicente Zarzoso; Fabien Squara

Fetal Cardiology (PA_4a1)

Wed, Sep 17 12:30-14:00 in room Pantanal

Poster session

12:30 *A Longitudinal Observation of Non-invasive Fetal ElectroCardiogram (LONGFECG) Dataset: Advancing Prenatal Monitoring (111)*
Eleonora Sulas; Tina Rommes; Shalom Darmanjian; Eva Hansenne; Melissa Ingersoll; Julien Penders; Quentin Noirhomme; Ravi Gunatilake

12:30 *Development of Robust Machine Learning Models for Fetal Heart Anomaly Detection Using the NInFEA Maternal and Fetal ECG Database (147)*
Soumaya Ghali

12:30 *Automated Pediatric Ventricular Pre-Excitation (Wolff-Parkinson-White Syndrome) Detection in 12-Lead ECG Using Deep Learning and SHAP-Based Interpretability (180)*
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Chairs: Olivier Meste, João Salinet

Awards and closing remarks (MC)
Wed, Sep 17 16:00-17:00 in room Amazônia
Chairs: Olivier Meste, João Salinet

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Michael Clerx
Miguel Vizcardo
Mikhail Chmelevsky
Mohsen Motieshirazi
Muhammad Haziq K. Azman
Nasim Katebi
Nele Vandersickel
Nico Bruining
Olaf Doessel
Oleg Aslanidi
Omar Escalona
Pablo Laguna
Pedro Gomis
Peter Charlton
Peter Macfarlane
Pietro Cerveri
Polychronis Dilaveris
Qiao Li
Ramon Casanella
Raquel Cervigon
Ravi Ranjan
Remi Dubois
Reza Sameni
Richard Gregg
Rob MacLeod
Roberto Sassi
Rodrigo Weber dos Santos
Roger Abaecherli
Ronald Wilders
Rubén Molero Alabau
Salman Seyedi
Samaneh Nasiri
Samuel Emil Schmidt
Sebastian Zaunseder
Sepideh Nikookar
Seyedeh Somayyeh Mousavi
Shafa At Sheikh
Shijie Zhou
Soheil Saghafi
Stefan Borik
Steven Williams
Tammo Delhaas
Vaidotas Marozas
Valentina Corino
Valentyna Provaznik
Victor Mor-Avi
Vincent Jacquemet
Vito Starc
Vlasta Bari
Yashar Kiarashi
Yi Su
Zuzana Koscova

CinC 2026: Madrid, Spain

It is with great pleasure that we announce that the 2026 Computing in Cardiology Conference will be held in Madrid, Spain, from September 13th to 16th. This will be the third time in the long and successful history of the CinC that it has been hosted in Spain.

Madrid, the host city of CinC 2026, is the capital of Spain and a natural meeting point at the heart of the Iberian Peninsula. It is a vibrant, inclusive, and remarkably safe city, where visitors can enjoy the full spectrum of what it has to offer simply by walking through its streets – from grand boulevards and historic plazas to lively neighborhoods full of character. Renowned for its rich cultural life, Madrid is home to the world-famous Art Walk, which includes the Prado Museum, the Reina Sofía Museum, and the Thyssen-Bornemisza Collection. The gastronomic scene is equally impressive, with over 20 Michelin-starred restaurants, traditional Spanish taverns, and dynamic food markets such as the Mercado de San Miguel. Sports are also an integral part of the city's identity, with world-renowned football clubs like Real Madrid CF and Atlético de Madrid. The city boasts a highly efficient, affordable, and extensive public transport network, including one of Europe's largest metro systems, frequent bus services, and convenient airport connections, all of which make getting around easy and accessible for everyone. Thanks to Adolfo Suárez Madrid-Barajas International Airport, which connects with over 160 international destinations, and an extensive high-speed rail system with more than 100 daily connections, Madrid serves as an excellent hub for exploring the cultural, natural, and culinary richness of Spain and Portugal – from Mediterranean beaches to mountain ranges, historic cities, and UNESCO World Heritage sites. With excellent infrastructure, a long tradition of hosting international events, and a welcoming atmosphere, Madrid offers the ideal setting for both scientific exchange and memorable experiences beyond the conference. September in Madrid marks the end of sum-

mer and the beginning of autumn, with daytime temperatures typically ranging between 20 and 30℃. The city enjoys clear skies and long daylight hours during this season, making it an ideal time to explore its historical landmarks, parks, and cultural venues.

The conference will take place at the NH Collection Madrid Eurobuilding, a modern venue equipped with excellent facilities for scientific meetings, located in the Chamartín district – one of the city's main business and residential areas. The venue is just a short distance from emblematic areas such as Paseo de la Castellana. It is surrounded by a wide variety of hotels, restaurants, and cultural attractions, and well connected to train station Clara Campoamor (Chamartín), from where it is very easy to reach the airport and other parts of the city. Spain has consistently been one of the countries with the highest number of contributors to Computing in Cardiology, and the Spanish research community has played a central role in shaping many of the topics presented over the years. This edition will be organized by the Universidad Rey Juan Carlos (URJC) – Escuela de Ingeniería de Fuenlabrada, with the participation of faculty and students from the Biomedical Engineering Degree, a program focused on interdisciplinary education and innovation in healthcare technologies. URJC is one of Spain's most active public institutions in terms of academic growth and international collaborations, with campuses across the Madrid region and a strong emphasis on biomedical research.

The scientific program will begin with the Sunday Symposium, focused on the challenges of understanding and managing arrhythmias in both professional and amateur athletes. As physical activity impacts cardiac electrophysiology in complex ways, this session will explore how engineers and clinicians can work together to improve detection, characterization, and prevention using advanced technologies, wearable monitoring, and data-driven methods.

On behalf of the Local Organizing Committee, we are pleased to invite the international community to CinC 2026 in Madrid and look forward to welcoming you with the warm hospitality and scientific enthusiasm that characterizes our city and our country.

Óscar Barquero – Chairman Rebeca Goya – Vice Chairwoman *On behalf of the Local Organizing Committee Universidad Rey Juan Carlos – Escuela de Ingeniería de Fuenlabrada*

Monday, September 15

08:30	Welcome to CinC 2025, p. 52	Amazônia
09:00	YIA First Finalists (RDYA), p. 44	Amazônia
10:30	Coffee Break	M. Atlântica
11:00	ECG Biomarkers and Risk Stratification (S21), p. 44	Amazônia
11:00	Cardiac Digital Twins (S22), p. 45	Cerrado
11:00	Photoplethysmography (S23), p. 46	Caatinga
11:00	Cardiovascular imaging (S24), p. 46	Pampa
12:30	Lunch and social event	

Tuesday, September 16

08:30	Signal Quality and Preprocessing Techniques (S31), p. 47	Amazônia
08:30	Modeling cardiac channels, cells and tissue (S32), p. 47	Cerrado
08:30	Cardiac Vibration Signals (S33), p. 48	Caatinga
08:30	Open Software and Tools for Digital Twins of the Heart (S34), p. 49	Pampa
10:00	Coffee Break	M. Atlântica
10:30	Deep Learning and AI in ECG Analysis (S41), p. 49	Amazônia
10:30	Modeling cardiac arrhythmias and ablation (S42), p. 50	Cerrado
10:30	Medical Informatics (S43), p. 50	Caatinga
10:30	ECGI methods (S44), p. 51	Pampa
12:00	Lunch	M. Atlântica
12:05	Custo Med GmdH Presentation	M. Atlântica
12:20	Careers in industry session during lunch with Renata Valeri de Freitas (Escola Politécnica, University of São Paulo), Rey Sepehr (Baxter) and Luma Rissatti (Philips / INATEL), p. 52	Cerrado
13:00	Integrating AI and Mechanistic Models to Improve Cardiac Electromechanics (S51), p. 52	Amazônia
13:00	Modeling atrial electrophysiology and fibrillation (S52), p. 53	Cerrado
13:00	Analysis of Rhythm Disorders (S53), p. 53	Caatinga
13:00	Physionet Challenge (S54), p. 54	Pampa
14:30	Break	
14:45	Ventricular Arrhythmias (S61), p. 55	Amazônia
14:45	Methods for cardiac modeling (S62), p. 55	Cerrado
14:45	Pediatric and Developmental ECG Analysis (S63), p. 56	Caatinga
14:45	Physionet Challenge (S64), p. 57	Pampa
16:15	Poster Session 1 (PA), p. 57	Pantanal
16:45	Coffee Break	M. Atlântica

Wednesday, September 17

08:30	Innovative Approaches to Understanding and Treating Atrial Fibrillation: Bridging Clinical Practice, Computational Modeling, and Advanced Imaging (S81), p. 65	Amazônia
08:30	Cardiovascular and Cardiorespiratory Variability (S82), p. 66	Cerrado
08:30	Multimodal and Physiological Integration (S83), p. 67	Caatinga
08:30	Cardiac and Hemodynamics modeling (S84), p. 67	Pampa
10:00	Coffee Break	M. Atlântica
10:30	Atrial Arrhythmias (S91), p. 68	Amazônia
10:30	Heart Rate variability Applications (S92), p. 69	Cerrado
10:30	Clinical ECG Applications (S93), p. 69	Caatinga
10:30	Cardiac Mechanics and Heart Failure (S94), p. 70	Pampa
12:00	Lunch	M. Atlântica
12:30	Poster Session 2 (PB), p. 70	Pantanal
14:00	YIA semifinalists (SB1), p. 82	Amazônia
14:00	Heart Rate and Cardiovascular Variability (SB2), p. 82	Cerrado
14:00	Clinical applications of cardiac modeling (SB3), p. 82	Caatinga
14:00	ECGI applications (SB4), p. 83	Pampa
15:00	Closing Plenary (MC), p. 83	Amazônia
16:00	Awards and closing remarks (MC), p. 83	Amazônia