ESAO 2025

PROGRAMME OVERVIEW

ESAO 2025 | Day 1 (June 25) Programme overview

Click here for overview

Time	What	Location	More info
10:00 AM - 4:00 PM	ESAO Board meeting (private meeting)	TL 2148	
5:30 - 6:15 PM	Opening Ceremony Chairs: Prof. Dimitrios Stamatialis • Welcome Address: Congress President: Prof. Dimitrios Stamatialis • Presidential Address ESAO President: Prof. Ulrich Steinseifer	Main stage (TL 2275)	Read more
6:15 - 7:00 PM	Plenary lecture: MEDICAL DEVICE DEVELOPMENT; FROM FRUSTRATION TO FAILURE TO SUCCESS • Stephen R. Ash, MD, FACP, CEO of HemoCleanse Technologies LLC	Main stage (TL 2275)	Read more
7:00 - 9:00 PM	Welcome reception and Buffet	Networking area (Atrium)	Read more
10 AM - 7 PM	Set-up: activities for the innovation Square	Networking area (Atrium)	

ESAO 2025 | Day 2 (June 26) Programme overview

Click here for overview

Time	What
8:30 - 9:15 AM	Plenary lecture: Precision in Every Pore: Silicon Membranes for (Bio)Artificial Organ Innovation Shuvo Roy PhD, UC San Francisco (UCSF) Main stage (TL 2275) | Read more
9:15 AM - 5:00 PM	Innovation Square Exhibition, Posters, Bonding, Networking and drinks Innovation Square & Networking area (Ground floor and Second floor) | Read more
9:30 - 11:00 AM	parallel programme - 1 1A: Paediatric Mechanical Circulatory Support: Mechanical Circulatory Support for Paediatric Patients Symposium | Main Stage (TL 2275) | Read more 1B: New approaches for improved blood purification Oral session | Innovation stage (TL 1336) | Read more 1C: In-vitro and in-silico innovations in hemodynamics Oral session | Inspiration Stage (TL 1133) | Read more
11:00 - 11:30 AM	Coffee break Networking area (Atrium)
11:30 AM - 1:00 PM	parallel programme - 2 2A: Omics in Personalized Management of Cardiovascular and Kidney Disease Symposium | Main Stage (TL 2275) | Read more 2B: Poster rapid-fire presentation

	Special session | Innovation stage (TL 1336) | Read more 2C: Biomaterials & Surfaces Oral session | Inspiration Stage (TL 1133) | Read more
1:00 - 2:00 PM	Lunch Break Networking area (Atrium)
2:00 - 3:30 PM	parallel programme - 3 3A: International kidney replacement innovation roadmap Symposium | Main Stage (TL 2275) | Read more 3B: Bioengineering - Tissue regeneration Oral session | Innovation stage (TL 1336) | Read more 3C: Advances in heart pump technology: innovations and future directions 1 Oral session | Inspiration Stage (TL 1133) | Read more
3:30 - 5:00 PM	Poster Session Networking area (2nd floor) | Read more
5:00 - 6:00 PM	*ESAO GENERAL ASSEMBLY* Private session (meeting only for ESAO members) | Inspiration Stage (TL 1133)

1A | Paediatric Mechanical Circulatory Support: Mechanical Circulatory Support for Paediatric Patients

Heart failure from congenital heart defects affects 1-2 per 100 live births, while cardiomyopathy impacts 1 per 10,000 children under 1 year old. Ventricular Assist Devices (VADs) have progressed significantly for adults, with many new VADs reaching clinical trials, but paediatric Mechanical Circulatory Support (MCS) technology lags. The Berlin Heart EXCOR® system is currently the only approved paediatric VAD, offering good survival rates but also associated with risks such as haemorrhage and thromboembolic events, and confining patients to hospital due to its size. This symposium will highlight the clinical need for new paediatric MCS technology and research into novel and emerging solutions.

Chairs

Katharine Fraser & Marcus Granegger

The programme

Time	Presentation
	Welcome & introduction Katharine Fraser, Marcus Granegger
35 min	Keynote talk: Ulrike Herberg, Uniklinik RWTH AAchen Clinician's perspective on mechanical circulatory support for paediatric patients: Current problems – urgent demands
18 min	Restoring Ventriculo-Arterial Coupling By Speed Modulating Rotary Blood Pumps Theodor Abart, Christian Doppler Laboratory for Mechanical Circulatory Support, Department of Cardiac Surgery, Medical University Of Vienna, Austria
18 min	Towards optimisation of a paediatric axial blood pump with variable blade thickness Nathaniel Kelly, University of Bath
18 min	Advancing Fontan Assist Strategies: Integrating Classic Designs with Next-Generation Solutions through Modeling and Bench Testing Canberk Yildirim, Koc University
	Closing words Katharine Fraser, Marcus Granegger

1B | New approaches for improved blood purification

Chairs

- K. Gerritsen
-

The programme

Time	Presentation
	Welcome and introduction
35 min	Keynote talk Bill Fisell, VUMC
18 min	Silica Membranes For A Bio-Artificial Kidney Ronald C van Gaal, Utrecht University, the Netherlands
18 min	Polyelectrolyte-Coated Silicon-Rich Silicon Nitride Substrates For High-Clearance Selective Membranes For An Implantable Artificial Kidney Tadeo Alejandro Alcerreca Valdez, Utrecht University, the Netherlands
18 min	Optimizing Usability In Extracorporeal Albumin Dialysis Stine Koball, University of Rostock; Albutec GmbH; ProMedTec Germany GmbH, Germany
	Closing words

1C | In-vitro and in-silico innovations in hemodynamics

Chairs

- H. Schima
- R. Graefe

The programme

Time	Presentation
	Welcome and introduction
18 min	Quantifying Experimental Variability In Shear-Induced Hemolysis To Support Uncertainty-Aware Hemolysis Models Michael Neidlin, RWTH Aachen University, Aachen, Germany
18 min	A Novel Haemolysis Test Case: Progress From The "Blood Damage Workshop Group Calvin Wolfgramm, University of Rostock, Germany
18 min	Development Of Blood-Mimicking Fluids: A Comparative Study Of Rheological And Mechanical Properties Gesine Hentschel, Leibniz University Hannover, Germany
18 min	Development Of A Training Simulator For Neonatal Cannulation In Artificial Placenta Applications Danny van Galen, University of Twente, Enschede, the Netherlands
18 min	BiVACOR TAH hemodynamic design and physiological interaction in a clinical early feasibility study Roland Graefe, PhD BiVACOR Inc.
	Closing words

2A | Omics in Personalized Management of Cardiovascular and Kidney Disease

Cardiovascular and kidney diseases are major public health concerns, imposing significant social, economic, and healthcare burdens. These conditions are closely linked, each increasing the risk of the other. Rather than affecting a single organ, they involve complex interactions among multiple organs. This interplay significantly influences disease progression. Despite medical advancements, these diseases remain associated with higher mortality, reduced quality of life, and societal limitations. Personalized medicine offers hope for better patient care through big data and omics approaches combined with bioinformatics and artificial intelligence. These tools provide a holistic understanding of disease mechanisms, including multi-organ interactions, and can detect diseases more precisely, even before symptoms arise. Big data and omics approaches also address disease complexity and variability, supporting personalized care.

Chairs

Joachim Jankowski & Griet Glorieux

The programme

Time	Presentation
5 min	Introduction to EU-Cost PerMedik Griet Glorieux and Joachim Jankowski
25 min	Keynote talk: Omic Studies in CKD: Diagnostic Opportunities and Therapeutic Potential Merita Rroji, University of Tirana, Albania
15 min	Computational drug repositioning in cardiorenal disease: opportunities, challenges, and approaches Paul Perco, Medical University of Innsbruck, Austria, Delta4 GmbH, Vienna, Austria
15 min	(Prote)omics for superior management of kidney and cardiovascular disease - A thought-provoking impulse from Nephrology Joachim Beige, KfH-Nierenzentrum und Klinikum St. Georg, Nephrologie, Leipzig, Germany
15 min	The need for AI modelling in CKD using big data Marta Lopes, NOVA School of Science and Technology, NOVA University of Lisbon, Portugal
15 min	Calprotectin in vascular calcification and cardiovascular complications Julie Klein, Metabolic and Cardiovascular Research Institute, Toulouse, France
	Closing words: Griet Glorieux and Joachim Jankowski

2B | Poster Rapid fire presentation

During this session, all participants with a poster will pitch their research/topic. Every 3 minutes, a new (digital) poster will be presented. As a visitor, this allows you to gain a lot of inspiration in a short amount of time. Later that same day, you'll have the opportunity to explore all posters in more detail during the Poster Session, which takes place from 3:30 – 5:00 PM. More information about the poster presentation can be found here.

Chairs

J. Clauser & M. Neidlin

The programme

- 1. VA-ECMO CIRCUIT COMPONENT DECISION MATTERS: INVESTIGATING THE IMPACT OF CANNULA SIZE ON ECMO COMPONENTS AND HEMODYNAMICS IN AN IN-SILICO CLINICAL TRIAL
- 2. EXPANDABLE PERCUTANEOUS MICRO-AXIAL FLOW BLOOD PUMPS: TECHNIQUES FOR ACCURATE HYDRAULIC PERFORMANCE MEASUREMENT
- 3. IN-HOUSE HEMODIALYZER VISUAL SCORE ASSESSMENT TOOL
- 4. -
- 5. PATIENT-SPECIFIC SIZE AND AGE SCALING IN A 0D CARDIOVASCULAR MODEL
- 6. MIXED MATRIX MEMBRANES, CELLULOSE ACETATE/SILICA/METAL ORGANIC FRAMEWORK, FOR PROTEIN-BOUND UREMIC TOXINS REMOVAL IN THE ARTIFICIAL KIDNEY
- 7. NEW MEMBRANES FOR HEMODIALYSIS BASED ON BLENDS OF POLYETHERSULFONE (PES) WITH POLYETHYLENE OXIDE - POLYETHERSULFONE (PEO-PES) COPOLYMER
- 8. THE EMBOLESS® VENOUS CHAMBER EXTENSIVELY REDUCE AIR CONTAMINATION PASSING INTO HD PATIENTS´ BLOOD
- 9. TOWARDS FUNCTIONAL IN VITRO ISLETS OF LANGERHANS: DUAL MICROFLUIDIC APPROACHES FOR MICROSPHERE-BASED PSEUDOISLET FABRICATION
- 10. DEVELOPING A MULTI-PURPOSE PHYSIOLOGY MODEL - EMERGING BEHAVIOR AND INTERNAL VALIDATION
- 11. DIFFERENCES IN COMPLEMENT PRE-ACTIVATION IN PIG AND HUMAN AFTER BLOOD DONATION
- 12. TOWARDS BIOARTIFICIAL LUNG DEVELOPMENT – OPTIMIZATION AND INDIVIDUALIZATION USING 3D PRINTING
- 13. PRODUCTION OF OUTSIDE-IN FILTRATION HOLLOW FIBERS FOR A COMBINED LUNG AND KIDNEY SUPPORT DEVICE FOR PRETERM BABIES
- 14. A NOVEL DIRECT CARDIAC COMPRESSION DEVICE FOR SHORT-TERM MECHANICAL CIRCULATION SUPPORT
- 15. DIRECT CARDIAC COMPRESSION DEVICE OPTIMIZATION THROUGH HEART COMPLIANCE SIMULATIONS

- 16. A NOVEL FLOW THROUGH IN-VITRO PIPELINE FOR HEMOCOMPATIBILITY TESTING OF ARTIFICIAL KIDNEY MEMBRANES
- 17. EVALUATION OF MATERIALS FOR A SOFT ARTIFICAL VENTRICLE
- 18. ELECTROSPUN PVDF NANOFIBERS: A PROMISING APPROACH FOR SOFT TISSUE REGENERATION
- 19. WHEN THE EXCEPTION BREAKS THE RULES: HEMOFILTRATION OXIRIS REVERSES EMPYEMA INDUCED SEPTIC SHOCK IN A CHILD: A CASE REPORT.
- 20. ENHANCING BLOOD COMPATIBILITY THROUGH SURFACE ENGINEERING: A SYSTEMATIC REVIEW
- 21. HIGH-RESOLVING VAD SIMULATIONS: CONRIBUTION OF FLOW IN FRONT SIDE CHAMBER ON HAEMOLYSIS
- 22. A NOVEL APPROACH TO IMMUNE MODULATION: POOLED PURIFIED BUFFY COATS IN AN EXTRACORPOREAL CIRCULATION MODEL

2C | Biomaterials & Surfaces

Chairs

- V. Weber
- T. Bode

The programme

Time	Presentation
	Welcome and introduction
18 min	Comparison Of Platelet Adhesion On Different Hard Material Coatings And Bonding Agents For Ventricular Assist Devices In A Flow Chamber Isabell Esslinger, Deutsches Herzzentrum der Charité, Institute of Computer-assisted Cardiovascular Medicine, Biofluid Mechanics Laboratory, Germany; Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin and Humboldt-Universität zu Berlin, Germany
18 min	Impact Of Microstructured Artificial Surface On The Dynamics Of Blood Platelets Corentin Raveleau, Université de Montpellier, Montpellier, France;
18 min	Bio-Inspired Hydrophilic Surface For Inhibiting Thrombus Formation Dominika Wójtowicz, AGH University of Krakow, Poland; University Hospital in Krakow, Poland
18 min	Mimicking The Endothelial Glycocalyx: Antimicrobial Peptide-Coated Surfaces For Biofilm Prevention Denisa Cont, University for Continuing Education Krems, Austria; Karl Landsteiner University, Austria
	Closing words

3A | International kidney replacement innovation roadmap

Worldwide, the number of people needing lifesaving kidney replacement therapy (KRT) steadily grows, but about 2/3 of them die without therapy access because KRT is expensive and requires a strong infrastructure. An international KRT innovation roadmap exists, but so far, progress is slower than targeted. Ambitious political statements about realizing this roadmap can only succeed if the granted funding matches the targeted time scale, and preferably the best brains worldwide should work together (the theme of the transatlantic pre-ESAO event in Kampen).

This session provides updates regarding technological advances, the organization of R&D, creating a network for international cooperation, as well as tips regarding entrepreneurial aspects and how standardization activities can help to attract funding. What can we learn from the US KidneyX Prizes Program, CDI, the "kidney project", the KIDNEW EU-project, as well as the Dutch National Growth Fund Projects NXTGEN HighTech & REGMED XB.

Chairs

Fokko Wieringa & Dimitrios Stamatialis

The programme

Time	Presentation
5 min	Welcome & introduction Fokko Wieringa, Dimitrios Stamatialis
25 min	Keynote talk Why does innovation take so long? A real-world example of creating an ammonium-specific sorbent Stephen Ash, HemoCleanse Technologies LLC
18 min	Dutch Initiatives from Portable to Implantable Dialysis Karin Gerritsen, UMC Utrecht, the Netherlands
18 min	International kidney replacement innovation roadmap Jonathan Himmelfarb, Mount Sinai Hospital, New York, USA
18 min	Bundling the best brains for breakthrough innovation Fokko Wieringa, IMEC, Eindhoven, the Netherlands, EKHA WG3, Brussels, Belgium
5 min	Closing words by Fokko Wieringa, Dimitrios Stamatialis

3B | Bioengineering - Tissue regeneration

Chairs

- T. Bode
- Gallego Ferrer
-

The programme

Time	Presentation
1 min	Welcome and introduction
35 min	Keynote talk: Biofabrication Technologies To Instruct Regeneration Lorenzo Moroni, Maastricht University, the Netherlands
18 min	AIMP- Automized, AI-Supported Platform For Implant Design, Fabrication And Testing Erik Kornfellner, Medical University of Vienna, Austria
18 min	Electrospun PVDF nanofibers: a promising approach for soft tissue regeneration Tom Bode, Leibniz University Hannover, Institute for Multiphase Processes, Germany
18 min	3D reconstruction of the inner structure of the mels bioreactor by micro-computed tomography Chiara Morano, Univ. of Calabria. Italy

3C | Advances in heart pump technology: innovations and future directions 1

Chairs

- M. Granneger
- I. Guidetti

The programme

Time	Presentation
	Welcome and introduction
35 min	Keynote talk: Retro-Prospecto Gap Analysis of Heart Pump Technology: Bridge Too Far? James Antaki, Cornell University, USA
18 min	Drive Train Design For Advanced Percutaneous Ventricular Assist Devices: Insights From Engineering Chiahao Hsu, magAssist Co., Ltd., Suzhou, China
18 min	A Soft Robotic Total Artificial Heart Concept Patricia Castellanos Vaquero, Erasmus MC, Netherlands
18 min	Custom Design And Optimization Of Ventricular Assist Devices For Left Ventricle Support Canberk Yıldırım, Koc University, TR
	Closing words

Poster Session

At ESAO 2025, poster presentations play a key role in showcasing cutting-edge research and innovative developments from across the field of artificial organs and related disciplines. Spread throughout Innovation Square, the posters offer a unique opportunity to dive into a wide range of topics, engage directly with researchers, and spark meaningful discussions. Whether you're presenting or exploring, the poster area is the place to be for inspiration, interaction, and discovery.

Chairs / Jury

J. Clauser & M. Neidlin

Poster award

All posters are competing for the ESAO Poster Award. As an event attendee, you can rate the poster(s) you have visited. You'll find the digital scoring form on each poster board. There is 1 prize for the best poster.

Review the posters by scanning the QR code below

The programme

In addition to the poster session, a Poster Rapid Fire session will also be held. During this parallel session (11:30 AM - 1:00 PM), all posters will be presented in 2 minutes. Click here for more information about this session.

- 1. VA-ECMO CIRCUIT COMPONENT DECISION MATTERS: INVESTIGATING THE IMPACT OF CANNULA SIZE ON ECMO COMPONENTS AND HEMODYNAMICS IN AN IN-SILICO CLINICAL TRIAL
- 2. EXPANDABLE PERCUTANEOUS MICRO-AXIAL FLOW BLOOD PUMPS: TECHNIQUES FOR ACCURATE HYDRAULIC PERFORMANCE MEASUREMENT
- 3. IN-HOUSE HEMODIALYZER VISUAL SCORE ASSESSMENT TOOL
- 4.
- 5. PATIENT-SPECIFIC SIZE AND AGE SCALING IN A 0D CARDIOVASCULAR MODEL
- 6. MIXED MATRIX MEMBRANES, CELLULOSE ACETATE/SILICA/METAL ORGANIC FRAMEWORK, FOR PROTEIN-BOUND UREMIC TOXINS REMOVAL IN THE ARTIFICIAL KIDNEY
- 7. NEW MEMBRANES FOR HEMODIALYSIS BASED ON BLENDS OF POLYETHERSULFONE (PES) WITH POLYETHYLENE OXIDE - POLYETHERSULFONE (PEO-PES) COPOLYMER

- 8. THE EMBOLESS® VENOUS CHAMBER EXTENSIVELY REDUCE AIR CONTAMINATION PASSING INTO HD PATIENTS´ BLOOD
- 9. TOWARDS FUNCTIONAL IN VITRO ISLETS OF LANGERHANS: DUAL MICROFLUIDIC APPROACHES FOR MICROSPHERE-BASED PSEUDOISLET FABRICATION
- 10. DEVELOPING A MULTI-PURPOSE PHYSIOLOGY MODEL - EMERGING BEHAVIOR AND INTERNAL VALIDATION
- 11. DIFFERENCES IN COMPLEMENT PRE-ACTIVATION IN PIG AND HUMAN AFTER BLOOD DONATION
- 12. TOWARDS BIOARTIFICIAL LUNG DEVELOPMENT – OPTIMIZATION AND INDIVIDUALIZATION USING 3D PRINTING
- 13. PRODUCTION OF OUTSIDE-IN FILTRATION HOLLOW FIBERS FOR A COMBINED LUNG AND KIDNEY SUPPORT DEVICE FOR PRETERM BABIES
- 14. A NOVEL DIRECT CARDIAC COMPRESSION DEVICE FOR SHORT-TERM MECHANICAL CIRCULATION SUPPORT
- 15. DIRECT CARDIAC COMPRESSION DEVICE OPTIMIZATION THROUGH HEART COMPLIANCE SIMULATIONS
- 16. A NOVEL FLOW THROUGH IN-VITRO PIPELINE FOR HEMOCOMPATIBILITY TESTING OF ARTIFICIAL KIDNEY MEMBRANES
- 17. EVALUATION OF MATERIALS FOR A SOFT ARTIFICAL VENTRICLE
- 18. ELECTROSPUN PVDF NANOFIBERS: A PROMISING APPROACH FOR SOFT TISSUE REGENERATION
- 19. WHEN THE EXCEPTION BREAKS THE RULES: HEMOFILTRATION OXIRIS REVERSES EMPYEMA INDUCED SEPTIC SHOCK IN A CHILD: A CASE REPORT.
- 20. ENHANCING BLOOD COMPATIBILITY THROUGH SURFACE ENGINEERING: A SYSTEMATIC REVIEW
- 21. HIGH-RESOLVING VAD SIMULATIONS: CONRIBUTION OF FLOW IN FRONT SIDE CHAMBER ON HAEMOLYSIS
- 22. A NOVEL APPROACH TO IMMUNE MODULATION: POOLED PURIFIED BUFFY COATS IN AN EXTRACORPOREAL CIRCULATION MODEL

ESAO 2025 | Day 3 (June 27) Programme overview

Click here for overview

Time	What
8:30 - 9:15 AM	Plenary lecture: ORGANS-ON-CHIPS: FROM PLATFORM TECHNOLOGY TO APPLICATIONS IN DRUG DEVELOPMENT Prof.dr. Andries van der Meer, Professor of Microphysiological Systems, Organ-on-Chip Centre Twente, University of Twente Main stage (TL 2275) | Read more
9:15 AM - 5:00 PM	Innovation Square Exhibition, Posters, Bonding, Networking and drinks Innovation Square & Networking area (Ground floor and Second floor) | Read more
9:30 - 11:00 AM	parallel programme - 1 4A: Advances in heart pump technology: innovations and future directions 2 Oral session | Main Stage (TL 2275) | Read more 4B: Biomaterials and organ models Oral session | Innovation stage (TL 1336) | Read more 4C: Research on oxygenation and membranes for artificial organs Oral session | Inspiration Stage (TL 1133) | Read more
11:00 - 11:30 AM	Coffee break Networking area (Atrium)
11:30 AM - 1:00 PM	parallel programme - 2 5A: Future therapies to reduce levels of uremic toxins in CKD Symposium | Main Stage (TL 2275) | Read more 5B: Advances in blood pump development Oral session | Innovation stage (TL 1336) | Read more

	5C: In-vitro and in-silico microfluidic and cell-culture models Oral session | Inspiration Stage (TL 1133) | Read more
1:00 - 2:00 PM	Lunch Break Networking area (Atrium)
2:00 - 3:30 PM	parallel programme - 3 6A: EuroELSO Symposium | Main Stage (TL 2275) | Read more 6B: Dialysis improvements & Clinical studies Oral session | Innovation stage (TL 1336) | Read more 6C: (Bio)Artificial Liver Oral session | Inspiration Stage (TL 1133) | Read more
3:45 - 5:15 PM	parallel programme - 4 7A: Dream, dare, do: how patients and health foundations drive artificial organ innovations Symposium | Main Stage (TL 2275) | Read more 7B: Other organs – crosstalk Oral session | Innovation stage (TL 1336) | Read more 7C: Supporting lung functions - the goals, challenges and advances Oral session | Inspiration Stage (TL 1133) | Read more
7:00 - 10:30 PM	Networking Event & Dinner Awards Ceremony: ESAO PhD Awards | SAGE Award | yESAO Award Optional event | Twentsche Foodhal | Read more

4A | Advances in heart pump technology: innovations and future directions 2

Chairs

- J. Antaki
- L. Friesello

The programme

Time	Presentation
1 min	Welcome & introduction
18 min	Modular Integration In Mechanical Circulatory Support: A Unified Platform For Multi-Indication Care Ifan Yen, magAssist Co., Ltd., Suzhou, China
18 min	Nyokassist™ Percutaneous Transvalvular Ventricular Assist Device Performance In High-Risk Percutaneous Coronary Intervention Chiahao Hsu, magAssist Co., Ltd., Suzhou, China
18 min	A Passive Beating Heart Mock-Loop With An Unpunctured Natural Heart To Enable Cardiac Device Testing Isabell Schulz, Deutsches Herzzentrum der Charité, Institute of Computer-assisted Cardiovascular Medicine, Biofluid Mechanics Laboratory, Berlin, Germany. Freie Universität Berlin and Humboldt Universität zu Berlin, Germany.
18 min	Modular And Versatile Three-Dimensional Cardiac Chamber Platform For Volumetric Performance Measurements Jana Hecking, Applied Stem Cell Technologies, TechMed Centre, University of Twente, Enschede, the Netherlands
18 min	The Once And Future Miniature Pediatric, Fully Maglev, Axial Flow Vad James F Antaki, Meinig School of Biomedical Engineering, Cornell University, Ithaca NY USA
	Closing words

4B | Biomaterials and organ models

Chairs

- J. Vollenbroek
- M. Schadow

The programme

Time	Presentation
1 min	Welcome and introduction
18 min	The Crucial Impact of Analyzed Area in Optical Hemocompatibility Evaluation Johanna C. Clauser, Department of Cardiovascular Engineering, Institute of Applied Medical Engineering, Medical Faculty, RWTH Aachen University, Germany;
18 min	Towards a leak-resistant and minimally invasive approach for large vascular anastomoses using circular staplers: optimization and future perspectives Siarhei Yelenski, Department of Thoracic Surgery, Medical Faculty, RWTH Aachen University, Aachen, Germany
18 min	Development Of A Perfusable 3D Bioprinted Skin Equivalent On A Millifluidic Chip Platform Monika Belak, Institute of Biomedical Sciences, Faculty of Medicine, University of Maribor, Maribor, Slovenia
18 min	In Situ Liver Spheroid Formation In A New Low Adsorption 3D-Printed Biochip Alexandre Martins, Sanofi, DMPK, In Vitro ADME, Vitry-sur-Seine, France; Université de Technologie de Compiègne, CNRS, Biomechanics and Bioengineering, Compiègne, France
18 min	Surface Micropatterning To Improve Endothelialisation Fabricated Via 2-Photon Polimerisation 3D Printer Marta Bonora, Medical University of Vienna, Austria; Ludwig Boltzmann Institute for Cardiovascular Research, Austria;
	Closing words

4C | Research on oxygenation and membranes for artificial organs

Chairs

O. Ter Beek & M. de Pinho

The programme

Time	Presentation
	Welcome and introduction
18 min	Design and Characterization of a 3D-Printed Flat Sheet Membrane Module for Extracorporeal Blood Circuits Flávia S.C. Rodrigues, Laboratory of Physics of Materials and Emerging Technologies (LaPMET), Center of Physics and Engineering of Advanced Materials (CeFEMA), Instituto Superior Técnico, Universidade de Lisboa, Portugal;
18 min	First Description: Hemoglobin-Based Dialysis Facilitates Decarboxylation And Oxygenation In-Vitro Jan Stange, University of Rostock Medical Center, Germany 2. ProMedTec, Germany
18 min	Modeling & Design Of An Implantable Dialyser For Hemodialysis Without Needles Tadeo Alejandro Alcerreca Valdez, Department of Nephrology and Hypertension, University Medical Centre Utrecht, Utrecht, NL
18 min	Cardiopulmonary Computational Model To Unravel Mechanical Ventilation Effects On Critical Hemodynamics Federica Colombi, Cardiovascular and Respiratory Physiology, Technical Medical Centre, University of Twente, Enschede, the Netherlands;
18 min	Predictive Numerical Modeling Of Oxygenation And Filtration Rates In A Dual-Function Oxygenator And Dialysis Device Imane El Jirari,FLOW, Dept. of Engineering Mechanics, KTH Royal Institute of Technology, Stockholm, Sweden
	Closing words

5A | Future therapies to reduce levels of uremic toxins in CKD

During the progression of chronic kidney disease (CKD), the retention of uremic toxins plays a key role in the development of uremic syndrome. Knowledge about the nature and biological impact of uremic toxins has grown exponentially over the past decades. However, the science on reducing the concentration and effects of uremic toxins showed few advancements. However, innovative approaches are in the pipeline.

Chairs

Joachim Jankowski & Griet Glorieux

The programme

Time	Presentation
	Welcome Griet Glorieux and Joachim Jankowski
30 min	Keynote talk Wearable artificial kidney and uremic toxin removal Dimitrios Stamatialis, University of Twente, The Netherlands
13 min	Drug-Toxin Interactions At Organic Anionic Transporter 1: Implications For Bioartificial Kidney Development Silvia Mihăilă, Utrecht University, The Netherlands
13 min	An on-line optical sensor for monitoring of the removal of prototypical uremic toxins from the blood during haemodialysis Jana Holmar, Tallinn University of Technology, School of Information Technologies, Department of Health
13 min	The duality of uremic toxicity Griet Glorieux, Ghent University Hospital, Belgium
13 min	Prevention of post-translational modifications by free amino acid supplementation Joachim Jankowski, RWTH Aachen, Germany
	Closing words by Griet Glorieux and Joachim Jankowski

5B | Advances in blood pump development

Chairs

- J. Clauser
- Wickramarachchi

The programme

Time	Presentation
	Welcome and introduction
18 min	Assessment Of A Fontan Assist Device During Exercise With 0d-3d Modelling Katharine Fraser
18 min	Friction Losses in Pivot Bearings of Rotodynamic Blood Pumps Leon Ballabani, Department for Cardiac and Thoracic Aortic Surgery, Medical University of Vienna, Vienna, Austria
18 min	Design Optimization Of A Right Ventricular Assist Device: Balancing Efficiency And Hemolysis Risk Ilaria Guidetti, Department of Chemistry, Material and Chemical Engineering, Politecnico di Milano, Milan, Italy
18 min	Hemocompatibility And Hemodynamics Of The Heartmate 3 In Pediatric Patients Manar El-Shaer, Christian Doppler Laboratory of Mechanical Circulatory Support, Department of Cardiac Surgery, Medical University of Vienna
18 min	Sensorless Estimation Of Instantaneous Flow Rate, Head Pressure And Viscosity In A Rotary Blood Pump Theodor Abart, Christian Doppler Laboratory for Mechanical Circulatory Support, Department of Cardiac Surgery, Medical University Of Vienna, Austria
	Closing words

5C | In-vitro and in-silico microfluidic and cell-culture models

Chairs

- Andries van der Meer
- Jeroen Vollenbroek

The programme

Time	Presentation
	Welcome and introduction
18 min	In Vitro Assessment Of Catecholamine Adsorption Profiles During Hemoadsorption Therapy Andreas Körtge, Department of Extracorporeal Therapy Systems, Fraunhofer Institute for Cell Therapy and Immunology IZI, Germany; Division of Nephrology, Center for Internal Medicine, Rostock University Medical Center, Germany
18 min	Study Of Embolic Agent Injection Via A Microfluidic-Based Model Of A Vascular Network Julien Massoni, Université de Technologie de Compiègne, CNRS, Biomechanics and Bioingineering (UMR 7338), France; Research and Innovation Department, Guerbet, France
18 min	Immune-Endothelial Co-Culture Model With Madcam-1 To Study Vedolizumab Response In Crohn's Disease Gloria Krajnc, Centre for human molecular genetics and pharmacogenomics, Faculty of Medicine, University of Maribor, Slovenia; Department for Science and Research, University Medical Centre Maribor, Slovenia
18 min	Towards 3D In Vitro Personalized Tumor Models: Characterization Of Bioprinted Glioblastoma Tissue Giuseppe D'Avenio, National Center for Innovative Technologies in Public Health, Istituto Superiore di Sanità, Rome, Italy
18 min	An In Silico Model Relating The Mechanics Of Cardiomyocytes To Cardiovsacular Haemodynamics For The Investigation Of Heart Failure And Related Therapies Akhilesh Kamtikar, Cardiovascular and Respiratory Physiology, Technical Medical Centre, University of Twente, Enschede, The Netherlands
	Closing words

6A | EuroELSO

VA-ECMO poses many challenges from clinical and engineering point of view. In this symposium, presenters will elucidate key aspects and hurdles in managing patients undergoing these therapies: how to make complex clinical decisions, how to optimize therapies using modelling techniques. The symposium is intended to highlight lessons learned from clinical studies and experience and from modelling and simulation, and to promote a discussion on how improve patients outcome in the near future.

Chairs

Prof. Dr. Dirk Donker & Prof. Dr. Michael Broome

The programme

Time	Presentation
	Welcome & introduction by Dirk Donker, Michael Broome
30 min	Keynote talk: Physiological challenges and research opportunities in ECMO therapy Dirk Donker, University of Twente
12 min	Challenges in conducting research in ECMO patients Myrthe van Steenwijk, Erasmus MC, Cardiology
12 min	Perspectives of computational modelling for bedside tailoring of cardiovascular support Michael Broome, Karolinska Institute, Department of Physiology and Pharmacology
12 min	ECMOve – a mobilization system for ECMO patients Danny van Galen, University of Twente
12 min	Investigation of ECMO hemocompatibility with numerical models Michael Neidlin, RWTH Aachen University
12 min	Investigation of ECMO performance using a physiological simulator with 3D aorta phantoms Libera Fresiello, University of Twente
	Closing words by Dirk Donker, Michael Broome

6B | Dialysis improvements & Clinical studies

Chairs

- B. Stegmayer
- A. Remuzzi

The programme

Time	Presentation
1 min	Welcome and introduction
18 min	Albumin Leakage During Hemodialysis: A Novel Optical Detection Approach Jana Holmar, Tallinn University of Technology, Department of Health Technologies, Estonia
18 min	Development And Evaluation Of An In-Vitro Model For Comparative Studies Of Mini-Dialyzers For Hemodialysis Marc Torrents Yeste, Advanced Organ bioengineering and Therapeutics, University of Twente, The Netherland
18 min	In-Vitro Performance Of The Neokidney(TM) Portable HD Device Under Various Simulated Patient Conditions Christian Gert Bluechel, Nextkidney S.A., Switzerland
18 min	International Standardization For Artificial Organs Fokko Wieringa, IMEC, Netherlands
5 min	Closing words

6C | (Bio)Artificial Liver

Chair

C. Legallais

The programme

Time	Presentation
1 min	Welcome and introduction
18 min	Purified Granulocytes In Extracorporeal Cell Therapy: Unique Dosing Regimens Challenging Conventional Blood Purification Techniques Gerd Klinkmann, Department of Anaesthesiology, Intensive Care Medicine and Pain Therapy, University of Rostock, Germany; Department of Extracorporeal Therapy Systems, Fraunhofer Institute for Cell Therapy and Immunology, Germany; International Renal Research Institute of Vicenza (IRRIV), Italy
18 min	Normothermic Machine Perfusion Of Explanted Human Metabolic Livers: A Proof Of Concept For Studying Inborn Errors Of Metabolism Riccardo Cirelli, Clinical Hepatogastroenterology and Transplantation Research Unit, Bambino Gesù Pediatric Hospital IRCCS (OPBG), Italy; HPB Surgery, Liver and Kidney Transplantation division, OPBG, Italy
18 min	The Number Of Apheresis Procedures To Treat Immune-Mediated Neurological Diseases Is On The Rise Bernd Stegmayr, Department of Public Health and Clinical Medicine, Unit Medicine, Umea University, Umea, Sweden
18 min	Aggravated Sepsis, Acute Kidney Injury And Microbiological Resistance In Four Years Pre-Post Covid Outcome Study Aleksandra Canevska-Taneska, University Clinic of Nephrology; Medical Faculty, Ss Cyril and Methodius University, North Macedonia, Republic of
18 min	Finding The Optimal Sterilization Method For Human Decellularized Livers: Assessing Microbiome, Matrix Proteins, And Biocompatibility Elena van Hengel, Erasmus MC Transplant Institute
	Closing words

7A | Dream, dare, do: how patients and health foundations drive artificial organ innovations

Designing a new medical device always involves striking a balance between business goals and patient needs. Most of the time, this leads to small improvements—what we call incremental innovation—on devices that already exist. But what if you're aiming for something more disruptive—an innovation that truly meets patient needs and transforms how care is delivered? These kinds of breakthroughs are much harder to get off the ground. They often lack funding and require development partners who aren't yet well established. One powerful way to build support is by sharing stories from the patient's perspective. This can inspire enthusiasm and buy-in from key stakeholders. However, traditional subsidies often aren't enough to move your project from research to a working clinical prototype. New funding models are needed. In this session, we'll explore three different artificial organ projects driven by patients and Dutch health charity organisations to learn how to engage patients effectively—and how to build a successful, patient-driven enterprise from the very beginning.

Chairs

- J. Boomker

The programme

Time	Presentation
5 min	Welcome & introduction
30 min	The artificial pancreas Robin Koops, Inreda Diabetic BV
18 min	Holland Hybrid Heart Tim Arts and Maran Lamberts, Saxion University of Applied Sciences
18 min	Neokidney Jasper Boomker, Dutch Kidney Foundation
18 min	Panel discussion: The success and challenges of patient-driven innovation With speakers and audience (led by Martin van Dijken, program manager Holland Hybrid Heart)
	Closing words

7B | Other organs – crosstalk

Chairs

- S. Mihaila
- A.M. Costa

The programme

Time	Presentation
1 min	Welcome and introduction
18 min	Combined Lung And Kidney Support In A Single Extracorporeal Device: Development Of The First Renox Prototype Ana Martins Costa, University of Twente, Netherlands
18 min	Haemodynamic And Haemolytic Characterization Of An Ex-Vivo Human Umbilical Cord Model Jan Heyer, Department of Cardiovascular Engineering, Institute for Applied Medical Engineering, Medical Faculty, RWTH Aachen University, Aachen, Germany
18 min	The Rebound In Serum Bilirubin Levels After Plasma Exchange (Pe) For Bilirubin Removal Is Pronounced In The Non-Survaiver-Group. Junko Goto, Yamanashi University School of Medicine, Department of Emergency and Critical Care Medicine, Japan
18 min	Targeting immunothrombosis in sepsis with extracorporeal blood adsorption Vladislav Semak, University for Continuing Education Krems, Austria
18 min	Combined Artificial Lung And Kidney Device (Renox): Extra Lung Support Delivered By Dialysis Fibers Ana Martins Costa, University of Twente, Netherlands
18 min	Closing words

7C | Supporting lung functions - the goals, challenges and advances

Chairs

- K. Zielinksi
- T. Verbelen

The programme

Time	Presentation
1 min	Welcome and introduction
18 min	In-Silico Analysis Of The Renox Device: Comparison Of Hemodynamics And Gas Exchange During Integrated Lung And Kidney Support In An Ecmo Cohort Jan-Niklas Thiel, Medical Faculty, Department of Cardiovascular Engineering, Institute of Applied Medical Engineering, RWTH Aachen University, Germany
18 min	ARTPLAC: Advancing Neonatal Care With An Innovative Artificial Placenta For Lung And Kidney Support Danny J.M. van Galen, Engineering Organ Support Technologies, Department of Biomechanical Engineering, Faculty of Engineering Technologies, Technical Medical (TechMed) Centre, University of Twente, Enschede, the Netherlands
18 min	Bio-Inspired Artificial Lung Based On A Three-Dimensional Capillary Network – Proof Of Principle Kai Philip Barbian, CVE-AME, RWTH Aachen University, Germany
18 min	The Hybrid (Pneumatic-Numerical) Respiratory System Simulator Designed For New Strategies Of Independent Lung Ventilation Krzysztof Zielinski, Nalecz Institute of Biocybernetics and Biomedical Engineering PAS, Poland
18 min	In Vitro Study Of Safety And Efficency Of A Novel Oxygenator Using Microspheres: Oxygenation, Hemolysis And Thrombogenicity Leonid Goubergrits, Deutsches Herzzentrum der Charité, Germany
	Closing words

ESAO 2025 | Day 4 (June 28) Programme overview

Click here for overview

Time	What
8:30 - 9:15 AM	Plenary lecture: (BIO) ARTIFICIAL SOLUTIONS FOR HEART REPLACEMENT THERAPY Cristiano Amarelli, Staff Surgeon at Monaldi, Azienda Ospedaliera dei Colli, Naples, Italy Main stage (TL 2275) | Read more
9:15 AM - 1:00 PM	Innovation Square Exhibition, Posters, Bonding, Networking and drinks Innovation Square & Networking area (Ground floor and Second floor) | Read more
9:30 - 11:00 AM	Parallel programme - 1 8A: Innovative Approaches in Albumin-Based Therapies: From Research to Clinical Applications in Artificial Organs Symposium | Main Stage (TL 2275) | Read more 8B: In-silico investigations for future clinical translation Oral session | Innovation stage (TL 1336) | Read more 8C: ESAO PhD, SAGE, awardees Special session | Inspiration Stage (TL 1133) | Read more
11:00 - 11:30 AM	Coffee break Networking area (Atrium)
11:30 AM - 1:00 PM	Parallel programme - 2 9A: IFAO symposium Symposium | Main Stage (TL 2275) | Read more 9B: Toxin removal in dialysis Oral session | Innovation stage (TL 1336) | Read more

	9C: Computational models to assess patient-specific heart support Oral session | Inspiration Stage (TL 1133) | Read more
1:00 - 1:30 PM	Closing ceremony ESAO Best Poster and Oral Award & Closing Remarks • Farewell Address: Congress President: Prof. Dimitrios Stamatialis • Presidential Address ESAO President: Prof. Ulrich Steinseifer • ESAO 2025 Best Oral award presented by: J. Vollenbroek & O. Ter Beek • ESAO 2025 Best Poster award presented by: J. Clauser & M. Neidlin TL 2275 | Read more
1:30 - 2:00 PM	Networking drinks & bites Networking area (Atrium)

8A | Innovative Approaches in Albumin-Based Therapies: From Research to Clinical Applications in Artificial Organs

Albumin plays a critical role in extracorporeal therapies and artificial organ systems, serving as both a therapeutic molecule and a functional component in device performance. This symposium, titled *Innovative Approaches in Albumin-Based Therapies: From Research to Clinical Applications in Artificial Organs*, will explore the latest advancements in this dynamic field, bridging cutting-edge research with clinical practice.

The session will begin with a keynote lecture by Prof. Steffen Mitzner (Germany, Rostock), who will provide a comprehensive overview of albumin's role in artificial organ technologies, addressing its mechanisms, clinical potential, and future directions. Subsequent talks will delve into specific aspects of albumin-based therapies, including its application in renal and liver support devices (Tobias Bingold, ADVITOS, and Jan Stange, Albutec). The symposium will conclude with insights into albumin's immunomodulatory properties and its ability to reduce inflammation in extracorporeal circuits (Kristina Boss, Sophie Brabandt).

By integrating fundamental research with real-world clinical applications, this symposium will highlight how albumin-based innovations are transforming the landscape of artificial organ technologies, offering new opportunities to enhance patient outcomes and address critical care challenges.

Chairs

- Gerd Klinkmann MD, PhD (Rostock)
- Kristina Boss MD, PhD (Essen)

The programme

Time	Presentation
	Welcome & introduction
30 min	Keynote talk: The Role of Albumin in Artificial Organ Technologies: Insights and Future Perspectives Prof. Dr.med. Steffen Mitzner
15 min	Nxecad Reduces Clif Expected 6 Months Mortality In Aclf Superior To Mars In Line With Significant Improvement Of Albumin Binding Function Jan Stange MD, PhD, Albutec GmbH
15 min	Extracorporeal Multiorgan Support Efectively Corrects Acidosis And Improves The Standardized Mortality Ratio: Analysis Of Patients With Acidosis From The Emos-Registry Tobias Bingold MD, PhD, ADVITOS GmbH

15 min	1-Year-Follow-Up: Alterations Of Albumin Function After Kidney Transplantation Kristina Boss, Department of Nephrology, University Hospital Essen, University Duisburg-Essen, Germany
15 min	Online Monitoring Of The Effectiveness And Capacity Of Albumin Dialysis Procedures For Extracorporeal Liver Replacement Therapy Sebastian Koball, MD, University of Rostock, Internal Medicine, Nephrology and Dialysis, Germany
	Closing words

8B | In-silico investigations for future clinical translation

Chairs

- M. Neidlin
- U. Kertzscher

The programme

Time	Presentation
1 min	Welcome and introduction
18 min	Virtual Clinical Trial Framework for Evaluating Mechanical Circulatory Support Devices Prashant Chand, Advanced Cardiorespiratory Engineering Laboratory, Centre for Biomedical Technologies and School of Mechanical, Medical, and Process Engineering, Queensland University of Technology, Australia
18 min	Virtual Population Study Of Blood Pressure Variations By Age And Gender Using A 0d-1d Cardiovascular Model Girindra Wardhana, University of Twente, The Netherlands
18 min	Continuous vs pulsatile arterial cannula flow for venoarterial extracorporeal membrane oxygenation: a multiscale computational fluid dynamics analysis Avishka Wickramarachchi, Advanced Cardiorespiratory Engineering Laboratory, Centre for Biomedical Technologies and School Mechanical, Medical and Process Engineering, Faculty of Engineering, Queensland University of Technology, Brisbane, Australia
18 min	Impact Of Mitral Valve Regurgitation On Flow Dynamics In Ventricular Assist Devices Mario Hahne, Universität Rostock, Germany
18 min	Numerical Simulations Of The Impact Of Rugous Artificial Surfaces On The Deployment Of Von Willebrand Factor Pierre-Louis Patrick Maurice Martin, IMAG, University of Montpellier, CNRS, France
	Closing words

8C | ESAO PhD, SAGE, awardees presentations

This special session highlights the winners of prestigious ESAO awards. Promising early-career researchers – recipients of the PhD Award, the SAGE Award, and other distinctions – will present their groundbreaking work. Be inspired by their innovation, dedication, and vision for the future of artificial organs and biomedical technology. A unique opportunity to witness the next generation of scientific excellence.

Chairs

Tom Bode & Isabell Esslinger

The programme

	Welcome and introduction On Friday, 27 June, during the Networking dinner, the winners will be announced.
15 min	ESAO 2025 PhD gold award Person 1
15 min	ESAO 2025 PhD gold award Person 2
15 min	ESAO 2025 PhD gold award Person 3
12 min	ESAO 2025 PhD silver award Person 1
12 min	SAGE 2025 paper award Person 1
10 min	yESAO awards Person 1
10 min	yESAO awards Person 2
	Closing

9A | IFAO Symposium

The International Federation for Artificial Organs encourages transcontinental cooperation among the three main societies, ESAO-JSAO-ASAIO. This session aims to provide some highlights about research activities from members of these societies, promoting discussions about how to learn from each other, opportunities and differences in each country/continent.

Typically, the IFAO session includes three speakers, but since last year, we decided to include other countries/continents not represented by ESAO-JSAO-ASAIO (e.g. Australia, Asia, South America). These additional 3 speakers can be selected from the list of abstracts received, as the congress organisers deem more appropriate.

Chairs

- Libera Fresiello
- Prof. Atsushi Mahara

The programme

Time	Presentation
	Welcome & introduction
25 min	In silico and in vitro liver models Cécile Legallais, University of Technology of Compiègne, France
25 min	Small-diameter decellularized vascular graft with neointima-inducing activity Presenter from JSAO, Atsushi Mahara, Tetsuji Yamaoka
18 min	Differentiated Function Of Primary Renal Tubule Cells In Extended Artificial Culture: Results At One Year William Henry Fissell, Vanderbilt University Medical Center, United States of America
18 min	A Novel Oxygenator Optimization Methodology Mitigating Dual-Low region Tingting Wu, Artificial Organ Technology Lab, School of Mechanical and Electrical Engineering, Soochow University, Suzhou, China; magAssist Co., Ltd., Suzhou, China
	Closing words

9B | Toxin removal in dialysis

Chairs

- M. Faria
- F. Wieringa

The programme

Time	Presentation
	Welcome and introduction
18 min	Optimized Blending Of Danaparoid Into Dialysis Membranes For Long Term Hemocompatibility Roberto Nese, University of Twente, The Netherlands
18 min	Development Of Dual-Layer Mixed Matrix Hemodialysis Membranes For Outside-In Filtration David Ramada, Advanced Organ bioengineering and Therapeutics -Technical Medical Centre- Faculty of Science and Technology, University of Twente, Netherlands, The
18 min	Warming Up To Improve Hemodialysis: Uremic Toxin Clearance Non-Linearly Rises With Temperature João Brás, Department of Nephrology and Hypertension, University Medical Centre Utrecht, Utrecht, The Netherlands
18 min	A Membrane-Drug-Dendrimer Synergic System to Enhance Protein Bound Uremic Toxin Clearance Rita F. Pires, Laboratory of Physics of Materials and Emerging Technologies (LaPMET), Center of Physics and Engineering of Advanced Materials (CeFEMA), Instituto Superior Técnico, Universidade de Lisboa, Portugal
18 min	Engineering The Future Of Hemodialysis: Innovative Membranes For Optimal Blood Purification Mónica Faria, Laboratory of Physics of Materials and Emerging Technologies (LaPMET), Center of Physics and Engineering of Advanced Materials (CeFEMA), Instituto Superior Técnico, Universidade de Lisboa, Portugal
	Closing words

9C | Computational models to assess patient-specific heart support

Chairs

- C. Amarelli
- U. Steinseifer

The programme

Time	Presentation
	Welcome and introduction
18 min	Mechanical Circulatory Support for Ventricular Septal Defects: Simulation Using a Lumped-Parameter Model Tingting Wu, Artificial Organ Technology Lab, School of Mechanical and Electrical Engineering, Soochow University, Suzhou, China; magAssist Co., Ltd., Suzhou, China
18 min	Integrative Modeling Framework for Mechanical Circulatory Support: Enabling Real-Time Hemodynamic Insights and Optimization IFan Yen, magAssist Co., Ltd., Suzhou, China; Department of Cardiovascular Engineering, Institute of Applied Medical Engineering, RWTH Aachen University, Aachen, Germany
18 min	Optimizing Intra-Aortic Pump Performance for Cardiac Support using CFD and AI Maxime Renault, Mines Paris - PSL, France
18 min	Uncertainty Quantification of 4D Flow MRI Sequence Variability on Computational Aortic Hemodynamics Models Dr. Michael Neidlin, *Michael Neidlin, Department of Cardiovascular Engineering, Institute of Applied Medical Engineering, Medical Faculty, RWTH Aachen University, Germany*
18 min	Optimization of rotor design for a catheter-implantable ventricular assist device. Jeison Fonseca, Institute Dante Pazzanese of Cardiology, Brazil; University of Sao Paulo, Brazil; University Sao Judas Tadeu, Brazil
	Closing words