Wednesday, June 26

8:00-10:00	**What's new in imaging**
	Dynamic CT-based planning of mitral and tricuspid interventions using the LARALAB software
	HOLOSCOPE-i
	HoloLenz - Virtual reality for planning of surgery and interventions
	Echo-fluoro fusion: three situations when it was a huge help and three it did not help
	Virtual and real model simulation for intervention in congenital heart disease
	3D echo -TrueVue
	Discussion
10:00-10:30	**Coffee break**
10:30-12:30	**Live only**
	Live case transmissions
12:30-12:45	**Lunch boxes**
12:45-15:35	**Live only**
	Live case transmissions
15:35-16:05	**Coffee break**
16:05-18:25	**Hemodynamics for interventionists**

	4D Flow MRI for pressure assessment - Should we all update our CVs?
	Hemodynamic assessment in the cath lab
	Exercise catheterisation - Unmasking the truth or fantastic thinking?
	Pulmonary vascular resistance assessment: cath, MRI or gut feeling?
	Invasive determinants of timing of mitral and tricuspid interventions
	Measurements of cardiac shunts in patients with severe pulmonary hypertension using the Innova system
	Minimally invasive cardiac output monitoring during critical interventions
	Managed transeptal flow in PH and LV diastolic dysfunction. Are fenestrated devices the answer?
	Discussion
	Challenging cases:
	Intracardiac shunt with pulmonary hypertension
	ASD with left ventricular dysfunction
	Multiple shunts: Which of them need treatment?
	Discussion
	Discussion with the experts: The future of routine hemodynamic assessment

Neonatal Interventions Focus Workshop

10:30-11:30	**Pulmonary vein stenosis**
	Assessment of pulmonary vein stenosis and changing indications for treatment
	Conventional and cutting balloon angioplasty
	Stenting of pulmonary veins??
	Drug therapy (stents/balloons/systemic treatment)

	Multiple, recurrent interventions - Are we adding to the damage?
	Discussion
11:30-12:30	**Major problems for imaging in neonates**
	Decision making in neonatal intervention - All you need is echocardiography!
	Decision making in neonatal intervention - What does CT add?
	Decision making in neonatal intervention - What does MRI add?
	Fusion imaging in neonatal interventions
	Discussion
12:30-12:45	**Lunch boxes**
12:45-15:35	**RVOT stenting in neonates**
	Indications
	Equipment choices: which wire, stent and delivery system to have available
	Step by step RVOT stenting: Recorded case
	RVOT stenting during cyanotic spells - How safe can we make it?
	Complications of RVOT stenting
	Surgical techniques (and challenges) following RVOT stenting
	Ductal stenting or RVOT stenting, when there's a choice which is better?
	Pros (and cons) of preserving the pulmonary valve
	When should a cardiologist ask for a shunt? – Case based lecture
	When should a surgeon ask for an RVOT stent? – Case based lecture
	Discussion

15:35-16:05	**Coffee break**
16:05-18:25	**Duct dependent pulmonary blood flow**
	Patient selection for stenting (or shunting?)
	Stenting or shunting-which is better?
	Techniques for stenting the duct
	Complications of stenting
	Jailing of the LPA, how much should we worry?
	Surgery after stenting the duct
	Treating coronary connections in pulmonary atresia with intact ventricular septum
	Hybrid ductal stenting vs. Norwood
	Discussion

Mitral Valve Focus Workshop

10:30-12:30	**Mitral valve intervention in mitral stenosis**
	Anatomy of the stenotic mitral valve
	Mitral stenosis quantification and pitfalls Including assessment in multivalve disease
	Intervention for rheumatic MS
	Imaging assessment for Balloon mitral valvuloplasty
	How to perform balloon mitral valvuloplasty My 8 most important tips and tricks
	Optimal patient selection and long term outcomes

	Intervention for degenerative MS (Valve in Mitral Annular Calcification - MAC)
	Pathophysiology of MAC
	Imaging assessment for transcatheter mitral valve in MAC
	Transcatheter approaches to valve in MAC- and the potential complications (valve migration, LVOT obstruction, paravalvar leaks)
	Perfecting the technique - open atrial transcatheter approach
	Outcomes for valve in MAC, what we know so far...
	Discussion
12:30-12:45	**Lunch boxes**
12:45-15:35	**Transcatheter therapies for mitral regurgitation: focus on repair**
	Role of imaging
	TEE imaging for patient selection
	Optimal procedure imaging
	Discussion
	FMR Trial Update
	MitraClip
	Carillon
	Why the discrepancies?
	Discussion
	MitraClip: case based learning
	Step by step (case example)
	Leaflet detachment and clip embolization
	Treatment for cardiogenic shock

	Second MitraClip procedure for recurrent MR
	MitraClip/NeoChord case
	Discussion
	Update on other mitral repair techniques
	Advanced interventions with NeoChord: Leaflet augmentation
	Recorded case – NeoChord and Cardioband
	NeoChord transcathether program: long term data
	MitralStitch
	Discussion
15:35-16:05	**Coffee break**
16:05-18:25	**Transcatheter therapies for mitral regurgitation: focus on replacement**
	Real world experience (use of TAVI valves in mitral position)
	Mitral valve in valve
	Mitral valve in ring
	Discussion
	Update on selected transcatheter mitral valve replacementtechnologies in native mitral valve disease
	Sapien M3 early feasibility study
	Tendyne - global feasibility study
	Fortis
	Intrepid (APOLLO)
	CardiAQ
	Tiara

	Live case transmissions
	Discussion

Device Development Focus Workshop

10:30-12:30	**Preclinical: From prototype to product and associated funding challenges**
	Moderators: Sameer Gafoor, Todd Brinton
	Patents and pitfalls
	Animal models: Selection and limitations
	Validation and verification: Structure & design
	Interview by Stephen Levin and David Cassak Expectation alignment in the pre-clinical process: Entrepreneurs, regulators and investors
	Case example #1
	Case example #2
	Panel discussion
12:30-13:15	**Lunch boxes and networking**
13:15-15:35	**Clinical: From animals to humans and associated funding challenges**
	Moderators: Sameer Gafoor, Kathleen Marshal
	Evolving regulatory landscapes—Europe
	Evolving regulatory landscapes—USA

	Evolving regulatory landscapes—China/Asia
	Strategic protocol development: Key elements
	Interview by Stephen Levin and David Cassak Expectation alignment in the clinical process: Regulators, entrepreneurs and investors
	Case example #1
	Case example #2
	Panel discussion
15:35-16:05	**Coffee break**
16:05-18:05	**Commercialization: From clinical research to reality and associated funding challenges**
	Moderators: Sameer Gafoor, Todd Brinton, Yuval Binur
	Clinical trial execution: Meeting the milestones
	Reimbursement: Managing the process
	Post-market strategies: Essential platforms
	Interview by Stephen Levin and David Cassak Expectation alignment in the post-market process: Investors, entrepreneurs and regulators
	Case example #1
	Case example #2
	Panel discussion
18:05-18:15	**Closing remarks**
Paravalvar Leak Closure Focus Workshop	

10:30-12:30	**Background, morphology and imaging of paravalvar leaks**
	Etiology and prognosis of paravalvar leaks after surgical valve replacement
	How to evaluate aortic paravalvar leaks using echo
	How to evaluate mitral paravalvar leaks using echo
	How to evaluate paravalvar leaks after TAVI
	Live case transmissions
	Role of pre-procedure imaging by CT
	Fusion imaging for paravalvar leak closure
	How to use angiography to measure paravalvar leaks
	Discussion
12:30-12:45	**Lunch boxes**
12:45-14:00	**Paravalvar aortic leak closure**
	How to close post-surgical aortic paravalvar leaks - case based lectures
	Bioprosthetic valves
	Mechanical valves
	How to close paravalvar TAVI leaks – case based lectures
	Post dilation, snaring, valve-in-valve
	Device closure
	Atypical aortic leaks – case based lecture
	Challenges and complications of aortic paravalvar leak closure – case based lecture
	Discussion

14:00-15:35	**Paravalvar mitral, tricuspid and pulmonary leak closure**
	How to close mitral paravalvar leaks - Case based lectures
	using retrograde access
	using transseptal access
	using percutaneous transapical access
	using hybrid transapical access
	Challenges and complications of mitral paravalvar leak closure
	Transcatheter closure of right sided (tricuspid and pulmonary) para valvular and para annular leaks
	First prospective trial of Occlutech PLD for paravalvular leak closure in Japan: RESEAL study
	Discussion

Thursday, June 27

8:00-10:00	**What's new**
	Congenital coronary artery anomalies: pathophysiology, relation with sudden death and catheter based interventions
	New intra-cardiac ultrasound catheter
	New treatment option for HOCM – Percutaneous intramyocardial radiofrequency ablation (The Liwen procedure)
	X3 platform for Laser -based ablation of atrial fibrillation
	Catheter technique for removal of cardiac tumors
	Coronary Reducer for treatment of refractory angina
	Endovascular aortic valve plus stent graft conduit
	TSP Crosser transseptal access device
	Lymphatic interventions to treat PLE and plastic bronchitis after Fontan
	B-Growth stent: 1 year follow up

	Discussion
10:00-10:30	**Coffee break**
10:30-13:00	**Intervention and support in the critically ill child**
	Surgeons and invasive cardiologists: Becoming equal partners in decision making in Intensive Care - Surgical perspective
	Surgeons and invasive cardiologists: Becoming equal partners in decision making in Intensive Care - Interventional perspective
	Observation or decisive intervention? When to catheterize the struggling patient on ICU?
	Risk stratification strategies for treatment in the very sick child
	Exit angiography and intervention
	Atrial decompression procedures. Who, what, when, where and how?
	Mechanical support devices in congenital heart disease. What's out there?
	Percutaneous ECMO cannulation and catheterisation on ECMO
	Case presentations and round table discussion
	Case 1
	Case 2
	Discussion
13:00-13:15	**Lunch boxes**
13:15-14:45	**CASPIAN @ CSI**
	Case 1
	Case 2
	Case 3
	Case 4
	Case 5

	Discussion
15:15-15:45	**Coffee break**
15:45-18:35	**From newborn to adult - Coronary fistulas**
	Embryology and morphology of coronary fistula
	What investigations are necessary in asymptomatic coronary fistula?
	Is there ever an indication for primary surgery for coronary fistula?
	Indications for interventional treatment of coronary fistula in infancy
	Technical aspects of treatment of coronary fistula in infancy
	Indications for interventional treatment of coronary fistula in adults
	Technical challenges of treating coronary fistula in adults
	Coronary interventionists should not independently treat coronary fistula
	Pediatric interventionists shouldn't independently treat coronary fistula
	Case studies
	Discussion
17:55-18:35	**Live only**
	Live case transmissions

TAVI Focus Workshop

10:30-11:10	**TAVI valve degeneration and paravalvar leak**
	TAVI durability, causes of valve degeneration: what we know so far

	How to diagnose and how to treat TAVI valve thrombosis (by echo and CT)
	Intermediate and long term follow-up post TAVI, the paravalvar leak is larger than desirable: plug, re-dilate or valve-in-valve
	Discussion
11:10-12:05	**New frontiers: Bicuspid valve**
	Technical considerations
	How to evaluate and size the bicuspid valve by CT and echo
	Hangzhou solution for bicuspid aortic valve
	This is how I treat bicuspid valves with a self-expanding valve
	This is how I treat bicuspid valves with a balloon expandable valve
	Discussion
12:05-13:00	**New frontiers: Pure native valve regurgitation, new techniques for valve-in-valve and TAVI in patients with congenital aortic stenosis**
	How to treat pure aortic regurgitation with the currently available non dedicated TAVI valves
	Bioprosthetic valve fracture: when and how?
	BASILICA: when and how?
	TAVI in congenital patients
	TAVI in non-calcified thick leaflet aortic stenosis
	Discussion
13:00-13:15	**Lunch boxes**
13:15-15:15	**Challenging cases and clinical updates**

	Live case transmissions from
	My worst TAVI complications
	Discussion
	Clinical updates
	TAVI for asymptomatic patients (EARLY-TAVI)
	TAVI in patients with moderate AS and reduced left ventricular systolic function (UNLOAD)
	TAVI for low risk patients
	Evolut versus Sapien S3 SOLVE-TAVI
	Other important TAVI trials 2018-2019
	Stroke prevention after TAVI (VKA, DOAC, single or dual antiplatelet therapy): what is the current state of evidence?
	Discussion
15:15-15:45	**Coffee break**
15:45-17:15	**Technology – Part 1 – Device parade**
	What differentiates this valve design from the others
	Evolut PRO
	Sapien 3
	Meridian valve
	Centera
	Horizon
	Jena
	Foldax
	Lotus Edge TH (Boston Sci)
	Acurate Neo (Boston Sci)

	Portico (Abbott)
	VenusA plus
	VitaFlow II (Microport)
	J Valve
	Device parade - hands-on
17:15-18:35	**Technology - Part 2**
	Ancillary technology
	Live case transmission
	InSeal Vascular closure (InSeal Medical, Israel)
	PerQseal (VivaSure Medical, Ireland)
	Aortic valve remodeling therapy (Leaflex performer)
	Discussion

VSD (and Aortic Root Perforation) Closure Focus Workshop

10:30-11:25	**Imaging**
	New international classification system for VSDs
	pmVSD- defining boundaries, conduction system and morphology of the exit into the RV
	What can CT and MRI offer over echo for decision making and case planning?
	Has 3D printing for VSD closure got any clinical benefit over modern imaging interfaces?
	Does holography have a future role to play in VSD assessment for interventions?

	Discussion
11:25-13:00	**Interventional pmVSD Closure- 20 years later and still learning?**
	Live case transmissions from
	Should excellent surgical results stifle the development of interventional VSD closure?
	Why we are better at this in developing countries?
	Why we are worse at this in developed countries?
	>5 year follow-up of pmVSD closure
	Heart block, tricuspid and aortic valve problems 1998 to 2018 - Is there a real difference?
	Discussion
13:00-13:15	**Lunch boxes**
13:15-15:15	**Device choice and development for pmVSD**
	Live case transmissions
	Looking back- what mistakes have we made?
	Looking forward- can past mistakes guide future devices?
	Matching anatomy to device- developing a clinical algorithm?
	Reviewing the evidence; is the heart block problem already a thing of the past?
	Development of biodegradable devices for pmVSD closure
	Discussion
15:15-15:45	**Coffee break**

15:45-17:15	**Post-myocardial infarction VSD**
	Surgical management of post-myocardial infarction VSDs
	3 case examples of catheter closure
	Results of transcatheter post-MI VSD closure -Review of the literature
	When one device is not big enough – reach for the BASSINET
	Transseptal, transmitral approach
	A new device for post myocardial infarction VSD closure: initial experience
	Discussion
17:15-17:55	**Aortic root perforation**
	The morphology of ruptured sinus valsalva
	Device closure of ruptures sinus of valsalva
	Aortic root perforation after TAVI Case based lecture
	Discussion

Pulmonary Artery Stenosis Focus Workshop

13:15-15:15	**Imaging, indications for treatment, treatment options**
	Morphology of congenital and post-operative pulmonary artery stenosis
	Pre-procedural imaging
	When to treat and when better not: case based lecture

	Treatment options: Angioplasty, Cutting balloons, stents
	Special considerations in syndromes
	Stent technologies
	Intraprocedural imaging
	Complex bifurcating stenoses
	Hybrid approach
	Follow up imaging after intervention
	Discussion
15:15-15:45	**Coffee break**
15:45-17:45	**Complications and case presentations**
	Live case transmissions
	Complications of pulmonary artery stenting
	My most challenging case – treated by balloon
	My most challenging case – treated by cutting balloon
	My most challenging case – treated by stent
	Discussion

Tricuspid Valve Repair and Replacement Focus Workshop

10:30-13:00	**Tricuspid valve repair and replacement: Part 1 (Anatomy, surgery, anatomy, physiology, repair)**
	Conventional surgical tricuspid repair and replacement: outcomes and challenges from a surgeon’s perspective

	Tricuspid valve imaging using TEE and ICE
	Tricuspid valve imaging using CT
	MitraClip for tricuspid intervention: state of current evidence
	How to determine if MitraClip is suitable for the tricuspid valve?
	How to determine if 4tech is suitable for the tricuspid valve?
	4tech: technology and results
	Cardioband
	Millipede
	Heterotopic implantation of the Edwards Sapien Valve into the IVC
	DaVingi TR System
	Mistral
	Discussion
13:00-13:15	**Lunchboxes**
13:15-15:15	**Tricuspid valve repair/replacement: Part 2 (Replacement)**
	Navigate
	Discussion
	TriSol (TriSol Medical, Yokneam, Israel)
	Discussion
	LuX valve
	Discussion
	Live case transmission
	Round-table discussion: **3 patients with severe tricuspid valve insufficiency: Which device is suitable?**

Time	Session
Friday, June 28	
7:00-8:00	**E-poster session 1: Pulmonary circulation**
	E-poster session 2: Valve disease
	E-poster session 3: Septal defects
	E-poster session 4: Coarctation and ducts
	E-poster session 5: Miscellaneous
8:00-9:30	**Congress welcome with live**
	Welcome on behalf of the course directors
	CSI out of the box lecture: Venous interventions
	CSI out of the box lecture: Interventional therapy in veterinary medicine
	CSI Interview
	Live case transmissions
9:30-10:00	**Charity session**
	Introduction
	Chain of Hope
	Heart warriors
	Success story from Uganda

10:30-11:00	**Coffee break**
11:00-13:10	**Hypertrophic cardiomyopathy**
	Live case transmissions
	Imaging of hypertrophic cardiomyopathy
	Surgical myectomy: technique and results
	Alcohol septal ablation
	My 8 most important tips and tricks
	Review of the data
	Endocardial septal ablation in adults and children
	The Liwen procedure: Transapical transseptal ablation
	MitraClip in HOCM
	Discussion
16:35-18:25	**From newborn to adult – Aortic stenosis**
	Fetal detection and prediction of postnatal treatment
	How imaging can guide treatment choice
	Debate: For neonatal aortic stenosis
	surgery is best
	ballooning is best
	Aortic stenosis with borderline left ventricle
	Age dependent access selection for balloon dilation
	Long-term results of balloon dilation in children

	Treatment of congenital aortic stenosis in adults
	Is there a role for TAVI in young patient
	Discussion
16:35-18:25	**Embolic protection**
	Stroke after structural cardiac interventions: incidence, definition and etiology
	Debate: Embolic protection
	Should be used in all TAVI cases
	Should be used in selected cases
	Discussion
	Captis full body embolic protection during TAVI
	Sentinel
	Triguard
	ProtEmbo protection system
	Discussion
11:00-13:10	**Live only**
	Live case transmissions
13:10-13:25	**Lunch boxes**
13:25-16:05	**Live only**

	Live case transmissions
16:05-16:35	**Coffee break**
16:35-18:25	**Challenging cases: LAA**
	Live case transmission
	Case 1
	Case 2
	Case 3
	Case 4
	Discussion

PFO Closure Focus Workshop

11:00-12:20	**Imaging**
	Atrial septum development and anatomy
	3D phenotypes
	Assessing for shunts (diagnosis, pitfalls)
	Systematic TEE approach to understanding morphology
	Intracardiac ECHO
	Angiographic assessment
	PFO shunt size in 300 consecutive patients
	Discussion

12:20-13:10	**Decisions and controversies**
	Hildick-Smith debate
	We should only be closing PFO's in the populations described in the randomized trials: FOR
	We should only be closing PFO's in the populations described in the randomized trials: AGAINST
	Discussion
	Cryptogenic stroke patients above 65 years of age
	PFO clinic with neurologists: case examples of optimizing patient selection
	Discussion
13:10-13:25	**Lunch boxes**
13:25-14:40	**Challenging PFO closure**
	Live case transmissions from
	Anatomy I have struggled with in the lab
	Complications of PFO closure and residual shunts – case-based lecture
	How much should we worry about AF?
	Discussion
14:40-16:05	**PFO closure devices and PFO indications**
	Live case transmissions

	Reasons to use an Amplatzer device
	Reasons to use a Gore device
	Reasons to use an Occlutech device
	Reasons to use a Lifetech device
	Reasons to use a Noblestitch
	Carag Bioresorbable Septal Occluder – 2 year results
	Discussion
16:05-16:35	**Coffee break**
16:35-18:25	**Other indications for PFO closure**
	Live case transmissions
	Platypnoea orthodeoxia
	Coronary embolus
	Migraine
	Diving
	PFO closure in children
	Debate: Should we be moving towards primary prevention?
	For
	Against
	Discussion

Pulmonary Valve Implantation Focus Workshop

11:00-12:20	**Imaging**
	When is pulmonary valve implantation indicated clinically?
	RVOT and RV: CT and MRI evaluation
	3D printing in planning
	Matching valve to the patient
	Intraprocedural imaging
	Image-guided computation and modelling for pulmonary valve replacement
	Discussion
12:20-13:10	**New valves – Device parade**
	Harmony
	Venus P-Valve
	Pulsta
	Alterra adaptive prestent device and Sapien 3
	Device parade
13:10-13:25	**Lunch boxes**
13:25-14:50	**Update on clinical trials and a glimpse into the future**
	Long term results of Melody valve
	Long term results of Sapien valve

	The risk of bacterial endocarditis after percutaneous pulmonary valve implantation – a metaanalysis
	Initial experience with Harmony valve
	Experience with Venus valve
	Initial experience with Pulsta valve
	Alterra adaptive prestent device and Sapien 3: feasibility and pivotal trial: update, results and pipeline technologies
	Tissue engineered valves for the pulmonary position
	Discussion
14:50-16:05	**Tips and Tricks**
	My 8 most important tips and tricks for implanting….
	… Melody valve
	…Sapien valve
	… Venus valve
	Hybrid approach to transcatheter valve implantation
	Complex transcatheter pulmonary valve cases
	Intentional fracture of bioprosthetic valve rings What are the risks and benefits and how do the acute and short term outcomes compare to surgical revision?
	How to manage complications in the catheter lab
	Discussion

Coarctation Focus Workshop

13:25-14:45	**Imaging**
	Aortic coarctation morphology in different age groups

	Assessment prior to intervention
	Post-procedural assessment methods
	Update on 4D MRI assessment in coarctation
	Planning intervention based on multimodality imaging and 3D printing
	3DRA – Fusion imaging in catheter lab
	Discussion
14:45-16-05	**Angioplasty/ Stenting**
	Different stents for use in coarctation
	Stenting in complex aortic coarctation – tips and tricks
	BeGraft stent in aortic coarctation: feasibility and early outcomes
	Transverse aortic arch stenting – tips and tricks
	Techniques for stenting in aortic atresia – tips and tricks
	Middle aortic syndrome - treatment
	Discussion
16:05-16:35	**Coffee break**
16:35-18:45	**Coarctation**
	Live case transmissions
	Balloon dilation vs stenting in different age groups
	Treatment of aneurysms after previous balloons, stents or surgery
	Late redilation of stents in coarctation
	Managing complications of coarctation stenting
	Does treatment in adults impact on long-term results
	Stent grafts

	The BeGraft for aortic stenting - Clinical trial results
	BeGraft Aorta - Tips and tricks
	Getting out of difficult situations: Balloon tear
	Discussion

LAA Closure Focus Workshop

11:00-11:55	**The evidence for LAA closure and emerging indications**
	Update on Watchman trials
	Update on Amulet trials
	When should the LAA be closed according to guidelines and recommendations
	New indications to explore
	Should LAA closure routinely be performed in TAVI patients with atrial fibrillation?
	Ablation combined with LAA ligation: The aMAZE trial, rational, design and update
	LAA closure in patients with PCI and atrial fibrillation
	Discussion
11:55-13:10	**Imaging**
	Pre-procedural CT – case presentations
	Model printing
	Virtual model printing
	Impact of computational modelling and simulation in LAA occlusion
	Pre and periprocedural TEE

	ICE for procedural guidance
	Fusion imaging for LAA closure
	How to assess complications during follow up
	Discussion
13:10-13:25	**Lunch boxes**
13:25-16:05	**How to use different LAA closure devices**
	My 8 most important tips and tricks – which are valid for all LAA closure devices
	Specific tips and tricks for …
	…. Watchman and the new Watchman Flex
	…. Amulet
	…. Lariat
	…. WaveCrest
	…. SeaLA
	…. LAmbre
	…. Cormos
	…. AEGES
	…. Occlutech
	…. AtriClip
	Postprocedural management
	How to evaluate residual leaks
	What to do with residual leaks?
	Management of complications – case-based lectures

	A case of device embolisation
	A case of tamponade
	A case of thrombus on the LAA occluder
	Discussion

Saturday, June 29

7:00-8:00	**Neil Wilson's challenging cases**
	Case 1
	Case 2
	Case 3
	Case 4
	Discussion
8:00-9:30	**Live only**
	Live case transmissions
8:00-9:10	**Cases from Far East you have never seen before: CSI Asia-Pacific @ CSI**
	From Thailand
	From Malaysia
	From Indonesia
	From Vietnam
	Discussion

9:10-10:20	**Cases from Africa you have never seen before - CSI Africa @ CSI**
	From Uganda
	From Kenya
	From Cameroon
	From Sudan
	Discussion
10:20-10:50	**Coffee break**
10:50-11:50	**Challenging cases: paravalvar leaks**
	Case 1: Mitral valve leak closure in a patient with mechanical aortic prosthesis
	Case 2
	Case 3
	Case 4
	Case 5
	Discussion
11:50-12:50	**Challenging cases: pulmonary valve**
	Case 1
	Case 2
	Case 3
	Case 4
	Discussion

12:50-13:05	**Lunch boxes**
13:05-14:05	**Challenging cases: tricuspid valve interventions (including valve in valve)**
	Case 1
	Case 2
	Case 3
	Case 4
	Discussion
14:05-15:05	**Challenging cases: RVOT stenting**
	Case 1
	Case 2
	Case 3
	Case 4
	Discussion
8:00-10:20	**CSI road to the top**
	How to get your foot into a training program
	How to get the best out of your training program
	Returning home: How to start a structural program from the scratch
	Why and how to do clinical research
	Why and how to become faculty at international conferences
	How to prepare an excellent lecture – even at the last minute
	How to moderate a conference – even without experience in the field

	How to get along with your colleagues
	Why and how to use twitter, facebook, instagram & more
	Why and how to get your foot into scientific societies
	How to interact with industry – dos and don'ts
	Discussion
	Panel discussion
	My biggest mistakes on the road to the top
10:20-10:50	**Coffee break**
10:50-12:50	**Access to the heart**
	Transcaval access: Suitability, step-by-step, tips and tricks, complications, outcomes
	Subclavian access: Suitability, step-by step, tips and tricks, complications, outcomes
	Transcarotid access: Suitability, step-by-step, tips and tricks, complications, outcomes
	Right atrial access
	Transhepatic access
	Transapical access and closure: Suitability, step-by-step, tips and tricks, complications, outcomes
	For TAVI I do not need alternative access – Transfemoral always works
	Round table discussion: three cases
	Discussion
13:05-15:05	**Live only**
	Live case transmissions
15:05-16:05	**Live only**

	Live case transmissions

ASD Closure Focus Workshop

8:00-10:20	**Introduction and imaging**
	Live case transmissions
	Anatomy of ASDs
	Intraprocedural imaging: TTE, TOE
	Intracardiac ECHO
	Matching device to septal morphology: suggestions for device selection
	ASDs I will not close with a device
	The problem of atrial fibrillation in ASD patients – before and after closure
	ASD closure in elderly patients - Concerns, technical challenges, outcomes
	Discussion
10:20-10:50	**Coffee break**
10:50-12:50	**How to close & tips and tricks**
	Live case transmission
	Our approach to ASD with no aortic rim
	Our approach to multiple defects
	Retrieval of embolized device

	Long term complications
	Erosion
	Arrhythmias
	Thrombus
	Closure of sinus venosus atrial septal defects
	Discussion
12:50-13:05	**Lunch boxes**
13:05-14:35	**Case based learning**
	Live case transmissions
	ASD closure with the ASD-R II
	Cardiac Erosion after ASD closure: Softer device can prevent of erosion?
	ASD closure and atrial arrhythmias
	Different techniques for closing large ASDs in small children
	ASD closure from right internal jugular vein
	Discussion
14:35-15:05	**Recent innovations and recent studies**
	12 months follow up of the Cardioform ASD device
	CARAG Bioresorbable Septal Occluder – 2 year results
	Occlutech fASD
	Discussion

PDA Focus Workshop

9:30-10:20	**PDA stenting for duct-dependent systemic circulation**
	PDA morphology and suitability for stenting
	Stent technology for ductal stenting
	Techniques of ductal stenting
	Complications of ductal stenting in HLHS
	Discussion
10:20-10:50	**Coffee break**
10:50-12:50	**PDA closure in premature infants**
	PDA morphology in premature infants
	Challenges faced in introduction of PDA closure in premature infants
	Where to close the ducts: Cath lab or neonatal units
	Modifications of technique using different devices
	Dealing with complications of PDA closure in premature infants – tips and tricks
	Results of PDA closure in premature infants
	Long term results of surgical closure of premature ducts
	PDA closure in preterm neonates – technical tips and results
	Amplatzer Piccolo
	Discussion

12:50-13:05	**Lunch boxes**
13:05-15:05	**PDA closure in children and adults**
	Live case transmissions
	Different ductal morphologies and relevance to closure
	Available devices for PDA closure
	PDA closure with different devices - Case based lecture
	Short term and medium term results of PDA closure in neonates and young children
	Transcatheter closure of large and long PDAs in infants using AVP II: Early experience
	Closure of PDAs in adults – technical challenges and tips
	Discussion

Heart Failure Interventions Focus Workshop

8:00-9:10	**The left ventricle**
	Revivent Less Invasive Ventricular Enhancement (LIVE) procedure
	Single center experience with Revivent Less Invasive Ventricular Enhancement (LIVE) procedure
	How to do it: Recorded case
	AccuCinch left ventricular repair
	Technology and procedural steps
	Early outcomes data in interventional heart failure treatment
	Discussion

9:10-10:20	**Telemedicine devices**
	Live case transmissions
	CardioMems
	Vectorious
	Other devices for heart failure monitoring
	Discussion
10:20-10:50	**Coffee break**
10:50-12:50	**Interatrial shunting**
	Live case transmission
	How could interatrial shunts work?
	Devices and concepts for interatrial shunting
	InterAtrial Shunt Device (IASD)
	Atrial Flow Regulator (AFR)
	NOYA: A new approach leaving nothing behind
	Interatrial shunting for diastolic left heart failure in children
	Discussion
12:50-13:05	**Lunch boxes**

13:05-14:10	**Other new concepts for device based treatment of heart failure**
	Syntach - A novel concept for long term cardiac support
	New aspects from the Lund University
	Pulmonary banding
	Discussion
14:10-14:50	**The valves**
	The role of transcatheter mitral valve repair in heart failure treatment
	The role of transcatheter tricuspid valve repair in heart failure treatment
	The role of TAVI in patients with heart failure
	Discussion