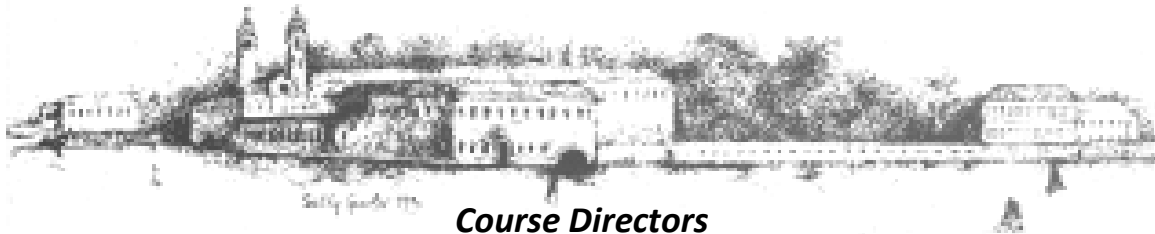


## San Servolo Advanced Epilepsy Course

# Presurgical investigation in the precision medicine era

**San Servolo, Venice (Italy), 21 July - 1 August 2024**



### Course Directors

**Fernando Cendes (Brasil) and Carlo Efsio Marras (Italy)**

The Course aims to teach attendees to (1) utilize basic knowledge to evaluate patients candidates for epilepsy surgery with cutting-edge imaging and electrophysiological techniques; (2) understand the nature and evolution of surgically remediable epilepsies; (3) recognize and select patients with pharmaco-resistant epilepsies that may benefit of surgical treatment; (4) plan neurophysiological, video-EEG and imaging investigations and interpret their results in the clinical context; (5) identify patients who require invasive evaluations and choose the appropriate invasive technique; (6) understand the various surgical resective and non-resective approaches; (7) manage an Epilepsy Surgery team. The Course is targeted to neurosurgeons, neurologists, neuropsychiatrists, neurophysiologists, neuroradiologists and clinical neuroscientists interested in the pathophysiology, diagnosis, and management of pharmaco-resistant epilepsies and the development of epilepsy surgery programs. The Course is based on frontal and interactive teaching, practical sessions, special group activities, and the presentation of clinical cases. Attendees will be grouped in small teams to prepare a research project on pharmaco-resistant epilepsy under the supervision of two faculty tutors.

#### Faculty - Tutors

Fernando Cendes	BR	Aileen McGonigal	Aus
Carlo Marras	I	Michele Rizzi	I
Albert Becker	D	Laura Tassi	I
Luca De Palma	I	Kette Valente	BR
Vadym Gnatkovsky	D	Anna Vaudano	I
Jorge Gonsales Martines	US		
Christoph Helmstaedter	D		
Hans Holtausen	D		
Samden Lathoo	US		

#### Faculty - Lecturers:

Sara Baldassarri	F
Sandor Beniczky	DEN
Helen Cross	UK
Rita Garbelli	I
Andrew McEvoy	UK
Veronica Pelliccia	I
Stefan Ramp	D
Domenico Tortora	I

The Course is supported by the **International League Against Epilepsy** (ILAE Surgery Commission, and ILAE Regional Commissions), the **Italian League Against Epilepsy (LICE)**, the **Fondazione IRCCS Istituto Neurologico Carlo Besta**.

## Course Program

Day 0		
7.00 pm	<b>Registration</b>	
7.30 pm	<b>Welcome dinner – Corte degli Inglesi</b>	
Day 1      Epilepsy Surgery Overview – Chairs: Carlo Efsio Marras, Fernando Cendes		
8.30-8.45 am	Introduction to the course	<i>de Curtis, Cendes, Marras</i>
8.45-9.45 am	Epilepsy surgery then and now	<i>Tassi, Gonsales-Martines</i>
9.45-10.45 am	Patient selection and presurgical evaluation workflow	<i>Lathoo</i>
10.45-11.15 am <i>Coffee break</i>		
11.15-12.00 pm	Surgery framework	<i>Rizzi</i>
12.00-1.00 pm	Round table: how to create an epilepsy surgery team	<i>De Palma, Rampp, Helmstaedter</i>
1.00 pm <i>Lunch</i>		
2.30-3.15 pm	Presurgical cognitive evaluation	<i>Helmstaedter</i>
3.15-4.00 pm	Pitfalls in the interpretation of EEG and video EEG	<i>Beniczky</i>
4.00-5.30 pm	<b>Discussion of research projects on epilepsy surgery</b>	<b>all tutors</b>
5.30-5.45 pm	While in Venice: do's and don'ts	<i>Valentina Guarino</i>
Day 2      Presurgical evaluation Part 1– Chairs: Sandor Beniczky, Samden Lathoo		
8.30-9.15 am	Semiology in surgical selection: temporal lobe	<i>Rampp</i>
9.15-10.00 am	Case presentations & discussions: semiology (temporal lobe)	<i>Rampp, Beniczky</i>
10.00-10.45 am	Semiology in surgical selection: frontal lobe	<i>Tassi</i>
10.45-11.15 am <i>Coffee break</i>		
11.15-12.10pm	Case presentations & discussions: semiology (frontal lobe)	<i>Tassi, Lathoo</i>
12.10-1.00 pm	Lecture: How to develop a project	<i>Cendes</i>
1.00 pm <i>Lunch</i>		
<b>afternoon</b>	<b>Project development</b>	
Day 3      Presurgical evaluation Part 2– Chairs: Aileen McGonigal, Stefan Rampp		
8.30-9.15 am	Semiology in surgical selection: parieto-occipital lobe	<i>McGonigal</i>
9.15-10.15 am	Case presentations & discussion: semiology (parietoccipital lobe)	<i>Lathoo, McGonigal</i>
10.15-11.00 am	Round table: the concept of networks in epilepsy surgery	<i>Lathoo, Rizzi, Gnatkovsky</i>
11.00-11.30 am <i>Coffee break</i>		
11.30-12.15 pm	Lecture: Virtual and augmented reality in epilepsy surgery	<i>Gonzales-Martines</i>
12.15-1.00 pm	Lecture: Clinical application of research in epilepsy	<i>Cendes</i>
1.00 pm <i>Lunch</i>		
<b>afternoon</b>	<b>Project development</b>	
Day 4      Imaging and Pathology– Chairs: Anna Vaudano, Albert Becker		
8.30–9.00 am	Briefing: feedback on the first three days of the course	<i>Marras, Cendes</i>
9.00-10.00 am	Structural MR	<i>Vaudano</i>
10.00-10.45am	Round table: Focal Cortical Dysplasia	<i>Tassi, Becker, Holthausen</i>
10.45-11.15 am <i>Coffee break</i>		
11.15-12.15pm	Malformation of cortical development	<i>Garbelli</i>
12.15-1.15 pm	Tumors	<i>Becker</i>
1.15 pm <i>Lunch</i>		
2.30-3.30 pm	Case presentations & discussion <b>presented by students</b> : Imaging	<i>Vaudano, Garbelli, Valente</i>
<b>afternoon</b>	<b>Project development</b>	
Day 5      Invasive monitoring– Chairs: Laura Tassi, Andrew McEvoy		
8.30- 9.00 am	Introduction to invasive monitoring	<i>Tassi, Mc Evoy</i>
9.00-10.00 am	Invasive EEG monitoring	<i>Pelliccia</i>
10.00-10.45 am	Rendering in SEEG: the compass	<i>Rizzi</i>

10.45-11.15 am <i>Coffee break</i>		
11.15-12.00 pm	When is invasive EEG really needed?	<i>Gnatkovsky</i>
12.00 -1.00 pm	Case presentations & discussion <b>presented by students</b> : SEEG	<i>Gonsales Martines, Pelliccia</i>
1.00 pm <i>Lunch</i>		
<b>afternoon</b>	<b>Project development</b>	
<b>Day 6</b> <b>Surgery– Chairs: Jorge Gonsales Martines, Hans Holthausen</b>		
8.30-9.00 am	Briefing: strengths and pitfalls of epilepsy surgery	<i>Gonsales Martines, Holthausen</i>
9.00-9.45 am	Resective surgery	<i>Rizzi</i>
9.45-10.30 am	Surgery in eloquent areas	<i>McEvoy</i>
10.30-11.15 am	Disconnections	<i>Marras</i>
11.15-11.45 am <i>Coffee break</i>		
11.45-12.30 pm	Round table: Resection vs. disconnection: clinical cases	<i>McEvoy, Rizzi</i>
12.30-1.15 pm	MR negative epilepsy	<i>Vaudano</i>
1.15 pm <i>Lunch</i>		
2.30-3.30 pm	Case presentation & discussion <b>by students</b> : MR-negative cases	<i>McGonigal, Holthausen</i>
3.30-4.15 pm	Particular syndromes (Sturge Weber, TSC, PNH)	<i>Valente</i>
4.15-5.00 pm	Surgery in patients with genetic epilepsies	<i>Baldassarri</i>
5.00-5.45 am	Cognitive Surgery Outcome	<i>Helmstaedter</i>
<b>Day 7</b> <b>Pediatric Epilepsy Surgery Part 1– Chairs: Helen Cross, Luca De Palma</b>		
8.30-9.00 am	Introduction to Pediatric Epilepsy Surgery	<i>Cross, De Palma</i>
9.00-10.00 am	Surgery in the first 4 years of life	<i>Cross</i>
10.00-10.45 am	MUHSEC and MOGHE	<i>Holthausen</i>
10.45-11.15 am <i>Coffee break</i>		
11.15-12.00 pm	Case presentation and discussion <b>presented by students</b>	<i>Tortora, Lathoo, Cross</i>
12.00-1.00 pm	Neurocognitive evaluation in children	<i>Valente</i>
1.00 pm <i>Lunch</i>		
<b>afternoon</b>	<b>Project development</b>	
<b>Day 8</b> <b>Pediatric Epilepsy Surgery Part 2– Chairs: Kette Valente, Veronica Pelliccia</b>		
8.30-9.00 am	Debate: is Stereo EEG the investigation of choice in all children?	<i>Pelliccia, Valente</i>
9.00-10.15 am	Pediatric case presentations & discussions <b>presented by students</b>	<i>Valente, Cross</i>
10.15-11.00 am	Surgery Outcome	<i>Cross</i>
11.00-11.30 am <i>Coffee break</i>		
11.30-12.15 pm	Artificial Intelligence	<i>De Palma</i>
12.15-1.00 pm	Lecture: The bridge to advanced neuroimaging	<i>Tortora</i>
1.00 pm <i>Lunch</i>		
<b>Afternoon</b>	<b>Project development</b>	
<b>Days 9-10</b>		
<b>Project development</b>		
<b>Day 11</b>		
8.30 -> 12:30	<b>Working group presentations:</b> - 45 minutes per group	all tutors
<b>14.00</b>	<b>Gondola Prize winner and end of the Course</b>	