



ISIN CONGRESS & EDUCATIONAL COURSE

Barcelona - Spain • November 4th - 9th, 2024

Congress President: Isabel Fernández-Conejero (Spain)
ISIN President: Sedat Ulkatan (USA)

Website
www.neurophysiology.org

SCIENTIFIC PROGRAM



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WELCOME ADDRESS

Dear Colleagues,

We are excited to announce the upcoming 2024 Barcelona Congress and Educational Course. This event follows the very successful meeting held in Athens in the fall of 2023. We appreciate your interest and great support, and our aim is to provide you with cutting-edge topics presented by excellent speakers in Barcelona.

The congress scientific program will feature extremely interesting magisterial lectures from leading scientists. The program is focused on current topics that are essential to the contemporary IOM profession. Our state-of-the-art educational course will offer gold-standard training materials for Spinal cord, Spine, and Peripheral nerve IOM.

Our host, Dr. Fernandez Conejero, who also organized the 2011 3rd ISIN Congress in Barcelona with scientific and educational committee members, have put together an outstanding congress program and a great social program. We believe that you will leave Barcelona with unforgettable memories and remarkable new scientific experiences.

Please follow us on our social media channels for updates and information.



Sedat Ulkatan, MD
ISIN President

WELCOME ADDRESS

Dear colleagues, dear friends,

It is a great honor to announce the next Educational Course and Congress of the International Society of Intraoperative Neurophysiology (ISIN) that will take place in Barcelona from the 4th to the 9th of November this year. This is the second occasion I have had the privilege to organize the ISIN's most meaningful events, including the Annual Educational Course and the Biannual Congress. That date was back in 2011 when I began my journey with the society. Since then, I have witnessed how the ISIN has evolved in prestige and respect and is now consolidated as "the state-of-the-art science" in intraoperative neuromonitoring.

This year, the Educational Committee tailored an outstanding program titled "Spine, Spinal Cord and peripheral nerve surgeries and intraoperative neuromonitoring (IONM)." The course belongs to the ISIN three-year cycle of educational classes and intends to be theoretical and practical. For that reason, discussion groups with limited places are the key tool to enrich the communication between professors and participants.

On the other hand, the new ISIN Scientific Committee made an exceptional effort to design an attractive scientific program for our Biannual Congress. The program includes innovative topics concerning brain connectivity, stimulation protocols, cranial nerves, new roads on motor responses, evidence in IONM, brain modulation, and functional neurosurgery, and discussions about team communication in the operation room.

Sadly, our founder, mentor, and friend, Professor Vedran Deletis, will not be among us for the first time since the ISIN was created. He will be immensely missed, but all his fellows and colleagues are committed to continuing his legacy. I think I can say on behalf of all of us: "Dear Vedran, wherever you are, you'll be proud of your team." As a novelty, I am pleased to announce that ISIN will deliver the following three prizes: The K. Kothbauer Young Investigator Award, the R. Mattmüller Travel Grant, and the Vedran Deletis Honorific Award.

The 2024 ISIN Educational Course and Congress will offer knowledge and new insights from a scientific point of view. Still, it is also a great opportunity to meet the companies that unconditionally support our society and create connections with colleagues worldwide.

Furthermore, as the meeting host, I will be delighted to receive you in the welcoming city of Barcelona, a cultural and cosmopolitan city with a warm climate and people who stand out for its hospitality. It is one of Europe's most essential metropolises and a leading meeting destination in terms of hosting international conferences.

In conclusion, I encourage you all to join us in Barcelona, where the community of ISIN will meet to advance the future of IONM in an exciting and friendly atmosphere and is committed to achieving an unforgettable experience.

Truly yours,



Dr. Isabel Fernández-Conejero
ISIN Congress President



ISIN CONGRESS & EDUCATIONAL COURSE

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GENERAL INFORMATION

ISIN 2024 DATES

EDUCATIONAL COURSE

November, 4th, 5th and 6th, 2024

ISIN CONGRESS

November, 7th, 8th and 9th, 2024

VENUE

Axa Auditorium Barcelona
Av. Diagonal, 547, Les Corts
08029 Barcelona - Spain



WEBSITE

www.isin2024.com
www.neurophysiology.org

IMPORTANT DATES

Abstract Submission:

Opens: Coming Soon

Registration:

Opens: April, 2024 / Deadline for early bird registration: September 15th, 2024

Places for the Educational Course are limited to 180. Registration will be on a first come first served basis.

CONTACT DETAILS

Organizer

ISIN
(International Society of Intraoperative
Neurophysiology)

www.neurophysiology.org



Registration-Abstract Submission

Sponsorship

Torres Pardo S.L.

Napols 187 2nd floor • Barcelona 08013 Spain

T. +34 93 246 35 66

www.torrespardo.com

TORRESPARDO
Congress Management

Registration:

Contact: Carolina Rovira
c.rovira@torrespardo.com

Sponsorship:

Contact: Desirée Muñoz
d.munoz@torrespardo.com

GENERAL INFORMATION

Language

The official language of the congress is English.
No simultaneous translation will be provided.

Registration & Abstract Submission

Only through the Association website:
www.isin2024.com
www.neurophysiology.org

Wireless Internet Access

WiFi Internet access area will be available at the venue.

Accommodation Details

Accommodation details are available at the website and further announcements.

Smoking

ISIN 2024 is a non-smoking event.

Attendance

The Educational Course is limited to 180 participants. The Congress usually attracts between 300 and 500 delegates from all over Europe and from all over the World.

Name Badges

Participants are obliged to wear the official name badges.

Exhibition

Access to the exhibition is free for registered participants. The exhibition will be open during the Educational Course and the Congress hours.

Lunch and Refreshments

Lunches are not included in the participants' registration fee. Coffee, tea will be available in the exhibition area during the breaks.

Certificate of Attendance

Participants will receive a certificate of attendance, for the Educational Course and the ISIN Congress.

Liability

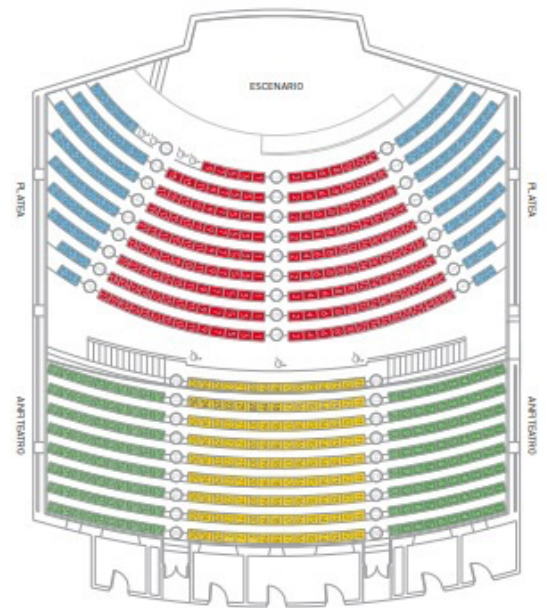
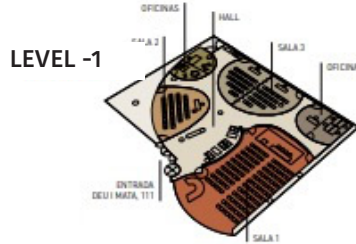
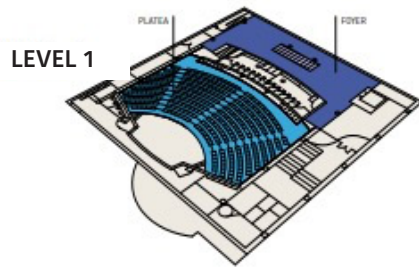
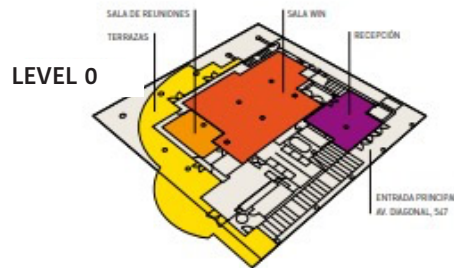
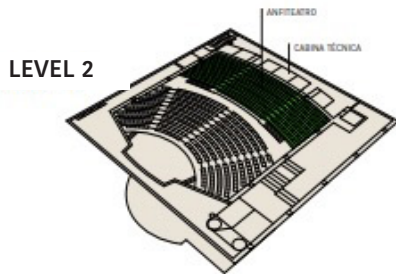
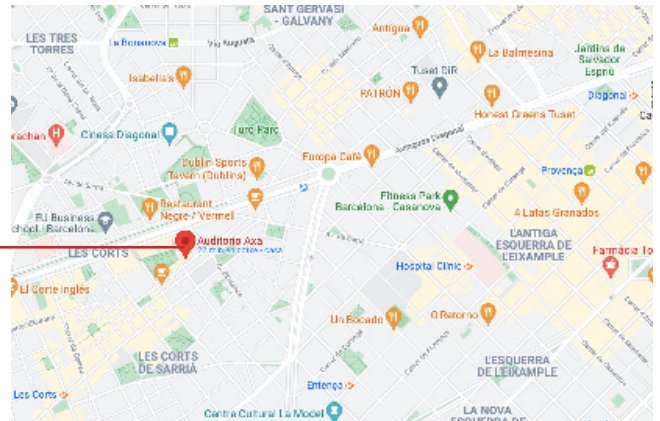
By registering for the Educational Course or the Congress by participating in the exhibition joined, participants and exhibitors agree that ISIN, the Organizing Committee or the Secretariat do not assume any responsibility for damage or injuries to persons or property during the event. Participants and exhibitors are advised to organize their own health, travel and personal insurances.

Letter of Invitation

Upon request, the Chairman of the Local Organizing Committee will be pleased to send a personal letter of invitation so as to enable participants to obtain supporting funds or visas for attending the event. These invitation letters cannot be considered as an offer of financial support by the organizers.

CONGRESS VENUE

Axa Convention Centre
 Avinguda Diagonal, 547,
 08029 Barcelona, Spain
www.axa.es/acerca-axa/auditorio-y-centro-de-convenciones



MAIN AUDITORIUM: 597 seats

ROOM 1: 150 seats

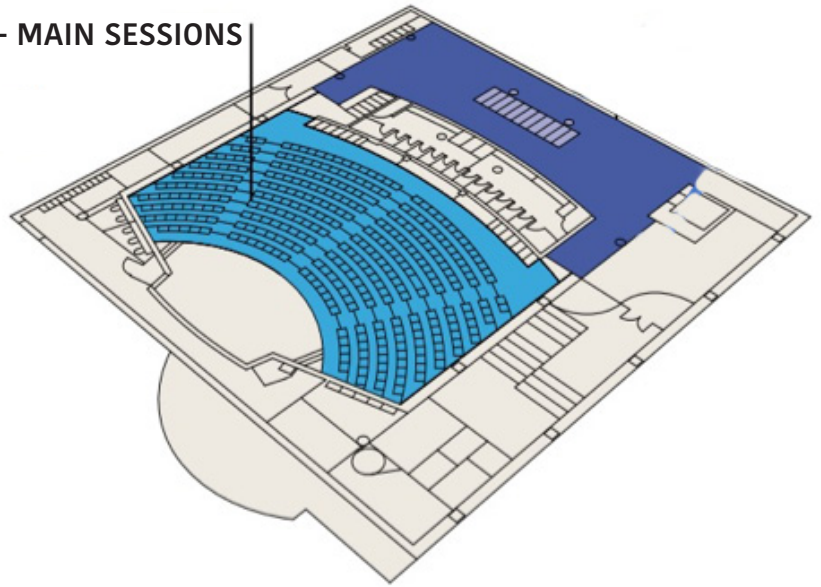
ROOM 2: 40 seats

ROOM 3: 70 seats

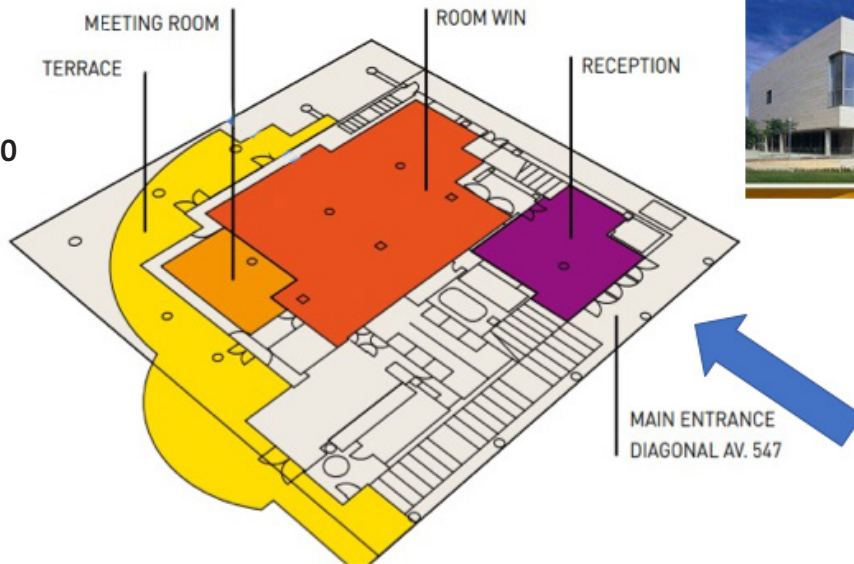
CONGRESS VENUE

AUDITORIUM - MAIN SESSIONS

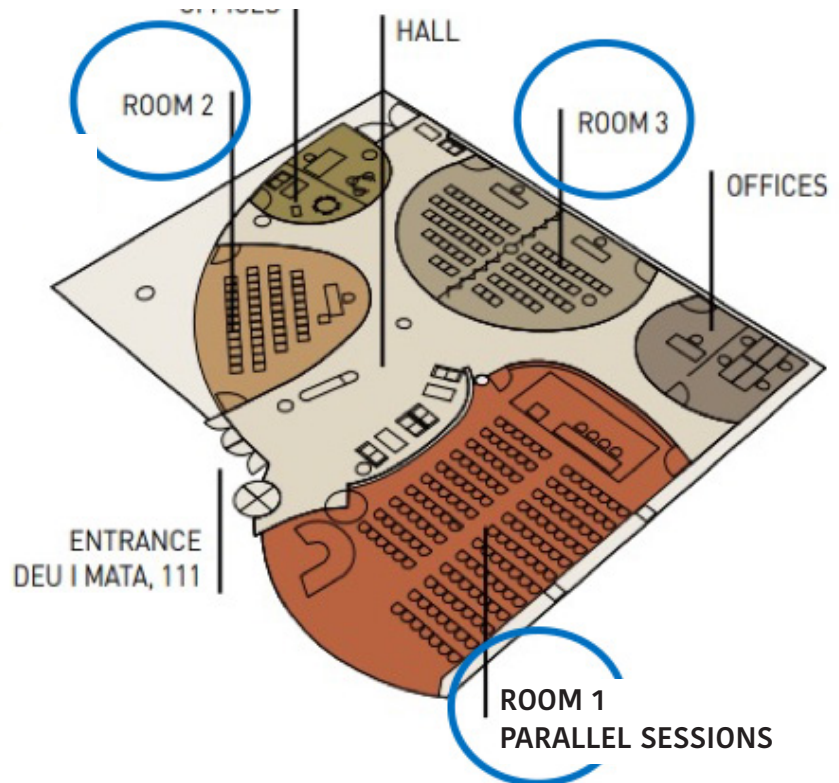
LEVEL 1



LEVEL 0



LEVEL -1



COMMITTEES

ISIN PRESIDENT



Sedat Ulkatan

CONGRESS PRESIDENT



Isabel Fernández-Conejero

COMMITTEES/SECTIONS

SCIENTIFIC COMMITTEE

Stanley Skinner (Chair) (USA)

Maria Tellez (co-Chair)(USA)

Davide Giampiccolo (Italy)

SENIOR CONSULTANT

David MacDonald (Italy)

EDUCATIONAL COMMITTEE

Gea Drost (Chair) (The Netherlands)

Gemma Pérez Fajardo (Spain)

SENIOR CONSULTANT:

Javier Urriza (Spain)

BOARD MEMBERS

PRESIDENT

Sedat Ulkatan (USA)

President Elect

Kathleen Seidel (Switzerland)

Past President

Isabel Fernandez-Conejero (Spain)

Secretary

Mirela V. Simon (USA)

Treasurer

Andrea Szelenyi (Germany)

Education Committee Chair

Gea Drost (The Netherlands)

REGISTRATION FEES

	Early bird registration Until September 15th, 2024	Regular registration From September 16th 2024
	2024 EDUCATIONAL COURSE*	
ISIN members	500€	650€
Non ISIN members	675€	800€
Residents and Technologists	400€	550€
	ISIN2024 CONGRESS	
ISIN members	700€	850€
Non ISIN members	900€	1.050€
Residents and Technologists	500€	650€
	COMBO (COURSE + CONGRESS)	
ISIN members	1.000€	1.150€
Non ISIN members	1.200€	1.350€
Residents and Technologists	770€	900€

21% SPANISH VAT INCLUDED

* PLACES FOR THE EDUCATIONAL COURSE ARE LIMITED TO 180. REGISTRATION WILL BE ON A FIRST COME FIRST SERVED BASIS.

CANCELLATION POLICY

- Cancelling 60 days prior to the Congress will involve a 20% penalty.
- Cancelling between 60 days and 30 days prior to the Congress will involve a 50%
- The name change can be managed by paying €25 + VAT for management fees.

All cancellation notices must be addressed in writing to the Technical Secretariat:
 A. Ms. Carolina Rovira
 Email: c.rovira@torrespardo.com

SCIENTIFIC PROGRAM - EDUCATIONAL COURSE

NOVEMBER 4th, 2024

BASICS IN SPINE & SPINAL CORD NEUROMONITORING

10:00-10:45h **Registration**

10:45-11:00h **Welcome and introduction**

*Isabel Fernandez Conejero
 (Barcelona, Spain)
 Sedat Ulkatan (New York, USA)*

Course Overview

Gea Drost (Groningen, Netherlands)

SESSION I: Introductory Course (Part I)

11:00-11:25h

**Basics:
 An overview of intraoperative
 electrophysiology**

*Isabel Fernández Conejero
 (Barcelona, Spain)*

11:25-11:50h

**The operating room environment:
 safety and troubleshooting**

Dimitrios Kefalas (Cardiff, UK)

11:50-12:15h

Communication in the OR

Stanley Skinner (Minneapolis, USA)

12:15-12:40h

How to optimize our signals

Javier Urriza (Pamplona, Spain)

12:40-12:55h

Discussion

12:55-14:05h

Lunch break

SESSION II: Introductory Course (Part II)

14.05-14:30h

**Anesthesia for intraoperative
 neurophysiology monitoring**

*Marko Sahinovic
 (Groningen, Netherlands)*

14:30-14:55h

Motor evoked potentials

Gea Drost (Groningen, Netherlands)
 14:55-15:20h

D wave monitoring

*David MacDonald
 (Castellabate, Italy)*

15:20-15:45h

**Somatosensory evoked
 potentials**

*Konstantinos Papadopoulos
 (Athens, Greece)*

15:45-16:00h

Discussion

16:00-16:30h

Coffee Break

SESSION III: Introductory Course (Part III)

16:30-17:00h

**Bulbocavernosus reflex (BCR)
 and H reflex**

*Gemma Pérez-Fajardo
 (Córdoba, Spain)*

17:00-17.30h

**Spinal cord stimulation
 and mapping**

Kathleen Seidel (Bern, Switzerland)

17:30-17:45h

Warnings in IOM

María Téllez (New York, USA)

17:45-18:00h

Discussion

18:00-19:00h

Magistral Lecture

**Motor system Excitability changes
 after SCI: Evaluation and treatment
 opportunity**

*Antonio Oliviero
 (National Hospital for Paraplegics,
 Toledo, Spain)*

20:00h

Social Event

SCIENTIFIC PROGRAM - EDUCATIONAL COURSE

NOVEMBER 5th, 2024

NEUROSURGERY

SESSION IV: Surgery and Neuromonitoring (Part I)

- 08:30-08:55h **Anatomy of the spinal cord and Spinal cord pathways**
Lluïsa Montesinos (Barcelona, Spain)
- 08:55-09:20h **Surgery of extramedullary tumors**
Davide Giampiccolo (London, UK)
- 09:20-09:45h **Surgery of intramedullary tumors**
Klaus Novak (Wien, Austria)
- 09:45-10:10h **IONM of spinal cord tumors**
Kathleen Seidel (Bern, Switzerland)
- 10:10-10:25h Discussion
- 10:25-10:55h Coffee Break

SESSION V: Surgery and Neuromonitoring (Part II)

- 10:55-11:20h **Surgery of tethered cord**
Francesco Sala (Verona, Italy)
- 11:20-11:45h **IONM of cauda equina**
Andrea Szelenyi (München, Germany)
- 11:45-12:10h **Surgery of peripheral nerve**
Joaquim Casañas (Barcelona, Spain)
- 12:10-12:35h **IONM of peripheral nerve surgeries**
Isabel Fernández Conejero (Barcelona, Spain)
- 12:35-12:50h Discussion
- 12:50-13:35h **Sponsored session**
 Session I
- 13:35-14:45h Lunch break

14:45-15:45h **Sponsored sessions**
 Session II
 Session III

SESSION VI: Artificial Intelligence (AI)

- 15:45-16:10h **AI in spine. Surgeon driven technology**
Ana Mirallave (London, UK)
- 16:10-16:15h Discussion
- 16:30-18:10 h **HANDS-ON TRAINING SESSIONS**
How to monitor spinal cord tumors?
Davide Giampiccolo (London, UK)
Kyung Seok Park (Seoul, South Korea)
- How to monitor tethered cord syndromes?**
Mirela Simon (Boston, USA)
Alejandra Climent (Barcelona, Spain)
- How to monitor Scoliosis?**
Beatriz Arranz (Murcia, Spain)
Roberto Pelaez (Barcelona, Spain)
- How to optimize MEPs and D-waves?**
Estela Llado-Carbo (Barcelona, Spain)
Alba Diaz Baamonde (London, UK)
- How to monitor other spine surgeries?**
M Angeles Sanchez Roldan (Barcelona, Spain)
Silvia Mazzali Verst (São Paulo, Brazil)
- How to optimize anesthesia in spinal monitoring?**
Marko Sahinovic (Groningen, Netherlands)
Onésimo Alaniz (Barcelona, Spain)
- 20:00h Social Event

SCIENTIFIC PROGRAM - EDUCATIONAL COURSE

NOVEMBER 6th, 2024

SPINE SURGERIES AND OTHER SURGICAL PROCEDURES

SESSION VII: Spine Surgeries (PART I)

- 08:30-08:50h **Anatomy of the spine
 and its deformities**
Ricardo Ferreira (Sao Paulo, Brazil)
- 08:50-09:10h **Surgery of scoliosis**
Sleiman Haddad (Barcelona, Spain)
- 09:10-09:30h **IONM in scoliosis surgery**
Francisco Soto (Santiago, Chile)
- 09:30-09:45h Discussion
- 09:45-10:15h Coffee Break

SESSION VIII: Spine Surgeries (PART II)

- 10:15-10:35h **Surgery of cervical spine
 procedures**
Julian Prell (Halle, Germany)
- 10:35-10:55h **IONM in cervical spine procedures
 and other spine procedures**
Jay Shils (Chicago, USA)
- 10:55-11:15h **Minimal invasive spine surgeries**
Oscar Godino (Barcelona, Spain)
- 11:15-11:35h **IONM in Minimally invasive
 spine surgery**
Alba Leon (Barcelona, Spain)
- 11:35-11:50h Discussion
- 11:50-13:00h Lunch Break
- 13:00-14:40h **HANDS-ON TRAINING SESSIONS**
How to monitor spinal cord tumors?
Davide Giampiccolo (London, UK)
Kyung Seok Park (Seoul, South Korea)

- How to monitor tethered cord
 syndromes?**
Mirela Simon (Boston, USA)
Alejandra Climent (Barcelona, Spain)

- How to monitor Scoliosis?**
Beatriz Arranz (Murcia, Spain)
Roberto Pelaez (Barcelona, Spain)

- How to optimize MEPs and
 D-waves?**
Estela Llado-Carbo (Barcelona, Spain)
Alba Diaz Baamonde (London, UK)

- How to monitor other spine
 surgeries?**
M Angeles Sanchez Roldan (Barcelona, Spain)
Silvia Mazzali Verst (São Paulo, Brazil)

- How to optimize anesthesia in
 spinal monitoring?**
Marko Sahinovic (Groningen, Netherlands)
Onésimo Alaniz (Barcelona, Spain)

SESSION IX: Other Procedures

- 14:45-15:10h **IONM in selective dorsal rhizotomy
 (SDR)**
Marc Sindou (Marseille, France)
- 15:10-15:35h **IONM in endovascular procedures**
Sedat Ulkatan (New York, USA)
- 15:35-16:00h **Descending aorta surgeries**
Elena Iborra (Barcelona, Spain)
- 16:00-16:25h **IONM in aorta procedures**
Mirela Simon (Boston, USA)
- 16:25h Discussion

FINAL REMARKS

- 17:10-17:25h **Presentation of Kyoto 2025**
Kunihiko Kodama (Kyoto, Japan)
- 17:25-17:40h **Course evaluation/ Quiz**
Gea Drost (Groningen, Netherlands)
- 17:40-17:55h **Adjourn**
Sedat Ulkatan (ISIN President)
Isabel Fernández Conejero (BCN ISIN Host)

SCIENTIFIC PROGRAM - CONGRESS PROGRAM

NOVEMBER 7th, 2024

07:00-07:45h **Registration**

07:45-08:00h **Opening**

Brain connectivity: Cortico-cortical evoked potentials (CCEP)

08:00-08:25h A canonical waveform
 for cortico-cortical evoked
 potentials
François Bonnetblanc
 (Montpellier, France)

08:25-08:50h CCEPs of the human arcuate
 fasciculus
Francesco Sala (Verona, IT)

08:50-09:15h CCEP estimated conduction times
 compared to the other tracts
 and fibers. Are the slow
 fibers found?
Pablo Alvarez (Bern, CH)

09:15-09:40h Discussion

09:40-09:55h Coffee break

Surgery and mapping of Brain Motor areas

10:00-10:25h Motor circuits of the primate
 precentral gyrus
Elena Borra (Parma, IT)

10:25-10:50h White matter connections of the
 precentral gyrus
Marco Catani (Chieti, IT)

10:50-11:15h Motor mapping and mapping
 techniques for lesions within
 the precentral gyrus
Lorenzo Bello (Milan, IT)

11:15-11:40h Discussion

11:45-12:15h **Life Time Achievement Award**
Vedran Deletis



12:15-13:00h

Magistral Lecture

Differences in the corticospinal
 and brainstem projections of the
 motor system among species
Roger Lemon (London, UK)

13:00-14:15h

Lunch break

14:15-15:15h

Oral Presentations

15:15-15:30h

Rudi Mattmüller Educational Grant
Rudi Matmüller



15:30-16:15h

Scientific Award
Karl Kothbauer



16:15-16:30h

Coffee break

16:30-16:40h

**Joint Session:
 European Association of
 Neurosurgical Societies
 (EANS)/ISIN**

16:40-17:05h

Future challenges in glioma surgery
Einar Osland Vik-Mo (Oslo, NO)

17:05-17:30h

Future challenges in spine
 and spinal cord surgery

17:30-17:50h

What are the surgeon's
 expectations of an IONM guided
 surgical case?

Opportunities and pitfalls.
Francesco Sala (Verona, IT)
Kathleen Seidel (Bern, CH)

17:50-18:10h

What are the neurophysiologist's
 expectations of an IONM-guided
 surgical case?

Opportunities and pitfalls.
Stanley Skinner (Minneapolis, USA)



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SCIENTIFIC PROGRAM - CONGRESS PROGRAM

NOVEMBER 7th, 2024

- 18:10-18:30h Developing a new neurophysiologist-surgeon language in the OR:
correct phrasing
Isabel Fernandez-Conejero (Barcelona, ES)
Andreu Gabarros (Barcelona, ES)
- 18:30-19:00h Discussion

SCIENTIFIC PROGRAM - CONGRESS PROGRAM

NOVEMBER 8th, 2024

08:00-08:25h	Paired stimulation protocols Physiology and pathways behind Modulation, Conditioning, and PrePulse Inhibition Josep Valls-Solé (Barcelona, ES)	14:00-15:00h	Oral Presentations
08:25-08:50h	Pair stimulation protocols for Motor cortex modulation John Rothwell (London, UK)	15:05-15:30h	Navigating the Roads of Motor Responses MEPs are not all the same in the dark: MEP nuances and D-wave role in Brain and Spinal cord surgeries Andrea Szelényi (Munich, DE)
08:50-09:15h	Cerebello-cortical (and beyond) conditioning-test stimulus under general anesthesia: proof of concept Davide Giampiccolo (London, UK)	15:35-16:00h	Can we apply knowledge about traumatic spinal cord injuries and neuroprotective interventions in surgery and IONM? Michael Fehlings (Toronto, CA) (Digital)
09:15-09:35h	Discussion	16:05-16:30h	Goals and methods for mapping subcortical and spinal cord areas Kathleen Seidel (Bern, CH)
09:40-10:00h	Sponsors Time	16:35-17:00h	Impact of Intraoperative monitoring for lumbosacral nerve root function... unrealistic expectations? W Bryan Wilent (Pennsylvania, USA)
10:10-10:25h	Coffee break	17:00-17:30h	Discussion
10:25-10:50h	Cranial Nerves Clinical features and surgical correlation of the lateral spread and the blink reflex in the hemifacial spasm and trigeminal neuralgia Isabel Fernandez-Conejero (Barcelona, ES)	17:30-17:45h	Coffee break
10:50-11:15h	Neurophysiological navigation of the Trigeminal nerve system and Accessory nerve mapping for surgery guidance Marc Sindou (Marseille, FR)	17:45-18:45h	ISIN GENERAL ASSEMBLY
11:15-11:40h	Larynx in vocalization and speech Maria J. Tellez (New York, USA)		
11:45-12:05h	Extraocular cranial nerve neuromonitoring E Matthew Hoffman (Rochester, USA)		
12:05-12:35h	Discussion		
12:35-13:55h	Lunch with Sponsors and Experts		



SCIENTIFIC PROGRAM - CONGRESS PROGRAM

NOVEMBER 9th, 2024

IONM Evidence module

- 08:00-08:25h IONM evidence “ups” and “downs”:
 Reversibility, mediation, and Big
 Datasets
Stanley Skinner (Minneapolis, USA)
- 08:25-08:50h IONM as a complex intervention
Robert N. Holdefer (Seattle, USA)
- 08:50-09:15h Big Dataset cohort studies:
 Are Diagnostic or Procedural
 Codes Accurate?
E Matthew Hoffman (Rochester, USA)
- 09:15-09:40h Best of Show:
 IONM comparative trials by
 Park and Simon
Kyung-Seok Park (Seoul, Korea)
Mirela Simon (Cambridge, USA)
- 09:40-10:05h A Bayesian cure for the IONM
 evidence base?
Ana Mirallave-Pescador (London, UK)
- 10:05-10:30h Discussion:
 IONM evidence Potpourri
- 10:30-11:30h Brunch & POSTERS with the experts

Brain Modulation and Functional Neurosurgery

- 11:30-11:55h Deep Brain Stimulation
 in movement disorders
 and other indications
Jay Shils (Chicago, USA)
- 11:55-12:20h Responsive Neurostimulation and
 Paradigm Shifts in Epilepsy Surgery
Mark Richardson (Boston, USA)
- 12:25-12:45h Discussion

12:45-13:45h **The Vedran Deletis Legacy and IONM's Future**

Expert Panel:

- Kathleen Seidel (Bern, Switzerland)
- Francesco Sala (Verona, Italy)
- Stanley Skinner (Minneapolis, USA)
- Isabel Fernandez-Conejero (Barcelona, ES)
- Sedat Ulkatan (New York, USA)

Open microphones for the Audience

13:50-14:00h CLOSURE

Isabel Fernandez-Conejero
 Past-president ISIN and local host

Sedat Ulkatan
 President ISIN





www.isin2024.com



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