



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 welcome you to the 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.

Welcome to Barcelona!



Sedat Ulkatan, MD
ISIN President

WELCOME ADDRESS

Dear colleagues, dear friends,

It is a great honor to welcome you to the 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

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

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

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

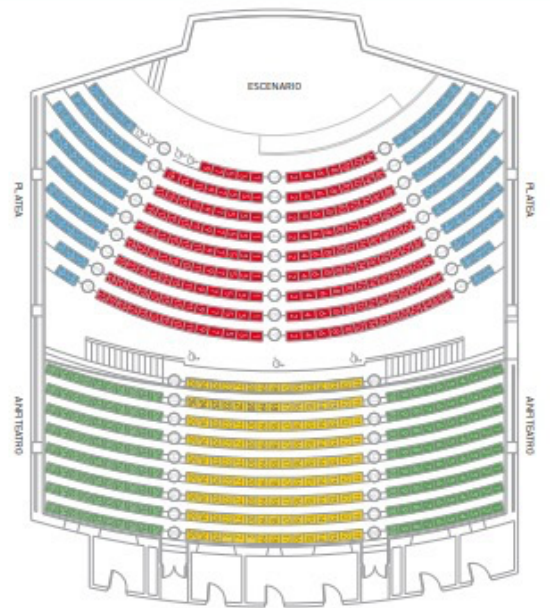
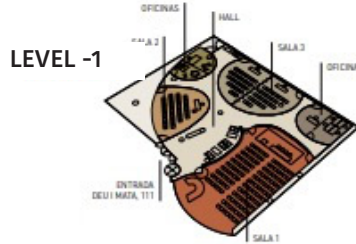
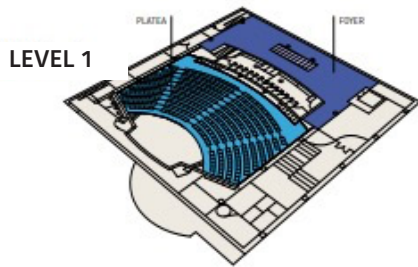
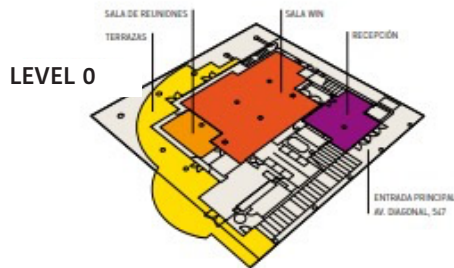
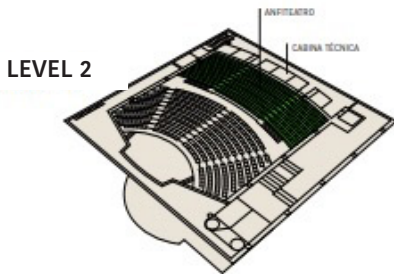
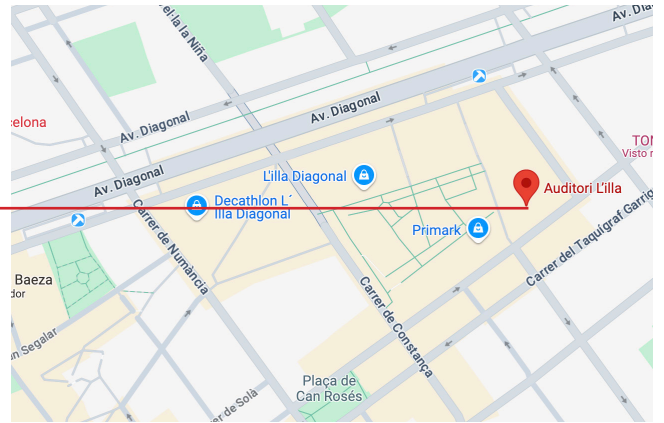
By registering for the Educational Course or the Congress by participating in the exhibition joined, participants and exhibitors agree that ISIN, the Organizing Committee or the Secretariat do not assume any responsibility for damage or injuries to persons or property during the event. Participants and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

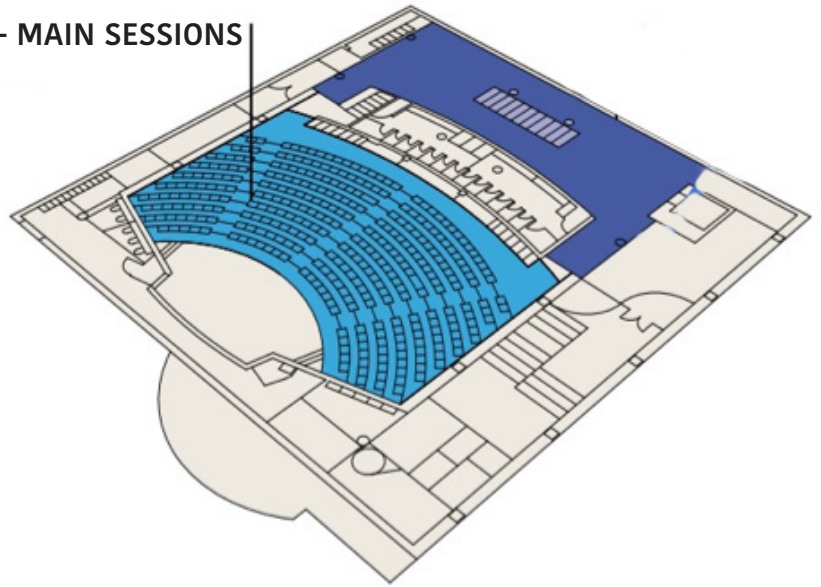
ROOM 2: 40 seats

ROOM 3: 70 seats

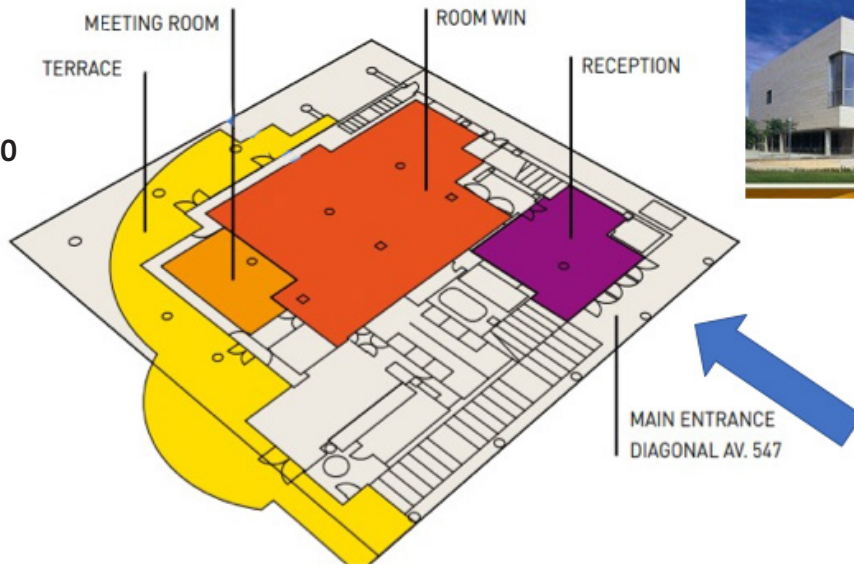
CONGRESS VENUE

AUDITORIUM - MAIN SESSIONS

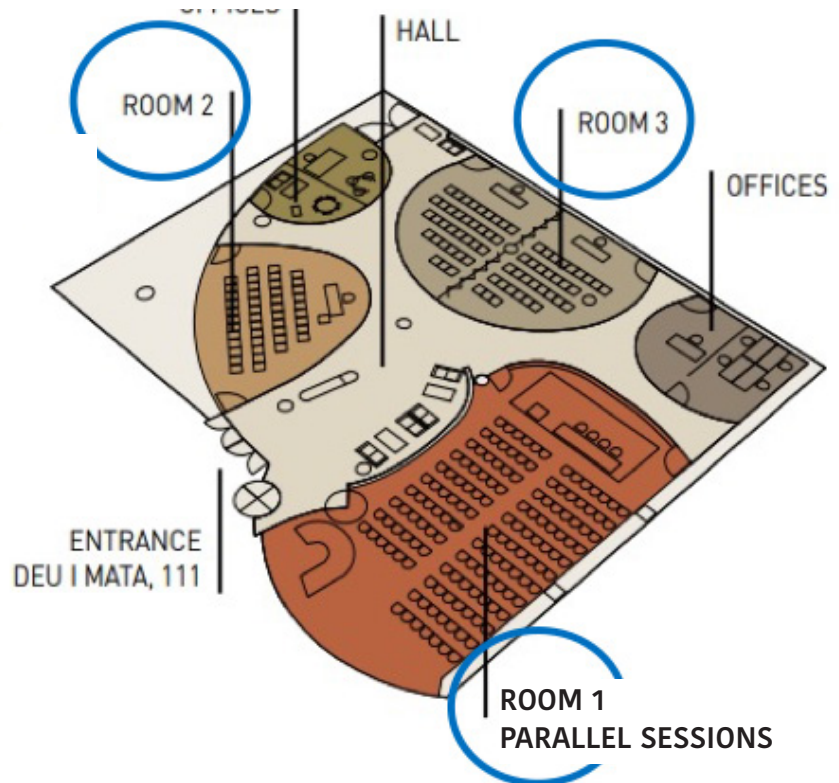
LEVEL 1



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

MONDAY, NOVEMBER 4th, 2024

BASICS IN SPINE & SPINAL CORD NEUROMONITORING

09:00-10:45h **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)

Moderators:

Jay Shils (Chicago, USA)
Javier Urriza (Pamplona, Spain)

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)

Moderators:

Dimitrios Kefalas (Cardiff, UK)
Stanley Skinner (Minneapolis, USA)

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)

Moderators:

Konstantinos Papadopoulos (Athens, Greece)
David MacDonald (Castellabate, Italy)

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

Moderators:

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

Motor system Excitability changes after SCI: Evaluation and treatment opportunity

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

SCIENTIFIC PROGRAM - EDUCATIONAL COURSE

TUESDAY, NOVEMBER 5th, 2024

NEUROSURGERY

SESSION IV: Surgery and Neuromonitoring (Part I)

Moderators:

Francesco Sala (Verona, Italy)

Andrea Szelenyi (München, Germany)

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)

Moderators:

Kathleen Seidel (Bern, Switzerland)

Kyung Seok Park (Seoul, South Korea)

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

Sponsored Session Session 1

**Use our newest software to prepare and
 carry out cases conveniently**

Nada Ibrahim

Nina Sitt

13:35-14:45h Lunch break

14:45-15:15h

Sponsored Sessions

Session 2

**Features to Facilitate
 Visualization of IOM Events**

Edrin Vicente

Corticobulbar MEPs:

A Challenging Technique

Alexandre Medeiros

15:15-15:45h

Session 3

Our Approach to Unique IONM

Julian Wisser

Ramona Schuler

SESSION VI:

Artificial Intelligence (AI)

Moderators:

Julian Prell (Halle, Germany)

Klaus Novak (Wien, Austria)

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)

SCIENTIFIC PROGRAM - EDUCATIONAL COURSE

TUESDAY, NOVEMBER 5th, 2024

**How to optimize anesthesia in
spinal monitoring?**

Marko Sahinovic (Groningen, Netherlands)

Onésimo Alaniz (Barcelona, Spain)

20:00h

WELCOME NETWORKING EVENT

MUSSOL DIAGONAL RESTAURANT

Walking distance from the venue

Address:

Av. Diagonal, 613, Les Corts,

08028 Barcelona

SCIENTIFIC PROGRAM - EDUCATIONAL COURSE

WEDNESDAY, NOVEMBER 6th, 2024

SPINE SURGERIES AND OTHER SURGICAL PROCEDURES

SESSION VII:

Spine Surgeries (PART I)

Moderators:

Kimia Rahnema (Barcelona, Spain)

Gea Drost (Groningen, Netherlands)

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)

Moderators:

Óscar Godino (Barcelona, Spain)

Francisco Soto (Santiago, Chile)

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

Moderators:

María Téllez (New York, USA)

Gemma Pérez-Fajardo (Córdoba, Spain)

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)

16:25-16:50h Discussion

SCIENTIFIC PROGRAM - EDUCATIONAL COURSE

WEDNESDAY, NOVEMBER 6th, 2024

FINAL REMARKS

- 16:50-17:05h **Presentation of Kyoto 2025**
Kunihiko Kodama (Kyoto, Japan)
- 17:05-17:20h **Course evaluation/ Quiz**
Gea Drost (Groningen, Netherlands)
- 17:20-17:35h **Adjourn**
Sedat Ulkatan (New York, USA)
(ISIN President)
Isabel Fernández Conejero (Barcelona, Spain)
(BCN ISIN Host)

SCIENTIFIC PROGRAM - CONGRESS PROGRAM

THURSDAY, NOVEMBER 7th, 2024

<p>07:00-07:45h Registration</p> <p>07:45-08:00h Opening Sedat Ulkatan (New York, NY, USA) Isabel Fernandez-Conejero (Barcelona, Spain)</p> <p>Brain connectivity: Cortico-cortical evoked potentials (CCEP) Moderators: Kathleen Seidel (Bern, Switzerland) Davide Giampiccolo (London, UK)</p> <p>08:00-08:25h A canonical waveform for cortico-cortical evoked potentials François Bonnetblanc (Montpellier, France)</p> <p>08:25-08:50h CCEPs of the human arcuate fasciculus Francesco Sala (Verona, Italy)</p> <p>08:50-09:15h CCEP estimated conduction times compared to the other tracts and fibers. Are the slow fibers found? Pablo Alvarez (Bern, Switzerland)</p> <p>09:15-09:40h Discussion</p> <p>09:40-10:10h Coffee break</p> <p>Surgery and mapping of Brain Motor areas Moderators: Gerard Plans (Barcelona, Spain) Andreu Gabarros (Barcelona, Spain)</p> <p>10:10-10:35h Motor circuits of the primate precentral gyrus Elena Borra (Parma, Italy)</p> <p>10:35-11:00h White matter connections of the precentral gyrus Marco Catani (Chieti, Italy)</p> <p>11:00-11:25h Motor mapping and mapping techniques for lesions within the precentral gyrus Lorenzo Bello (Milan, Italy)</p> <p>11:25-11:50h Discussion</p>	<p>11:50-12:15h Vedran Deletis Life Achievement Award Introduction by Sedat Ulkatan (New York, USA)</p>  <p>12:15-13:00h Magistral Lecture Differences in the corticospinal and brainstem projections of the motor system among species Roger Lemon (London, UK)</p> <p>13:00-14:00h Lunch break</p> <p>14:05-15:15h Oral abstracts: go to page 21 GROUP A (AUDITORIUM) Moderators: Javier Urriza (Pamplona, Spain) Alba Diaz-Baamonde (London, UK)</p> <p>GROUP B (ROOM 1) Moderators: Kathleen Seidel (Bern, Switzerland) Klaus Novak (Wien, Austria)</p> <p>15:25-15:50h Rudi Mattmüller Educational Grant Introduction by Julian Prell (Halle, Germany)</p>  <p>15:55-16:20h Karl Kothbauer Young Investigator Award Introduction by Francesco Sala (Verona, Italy)</p>  <p>16:20-16:50h Coffee break</p>
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SCIENTIFIC PROGRAM - CONGRESS PROGRAM

THURSDAY, NOVEMBER 7th, 2024

- 16:50-19:20h **Joint Session:
 European Association of
 Neurosurgical Societies
 (EANS)/ISIN**
 Moderators:
 Sedat Ulkatan (New York, USA)
 Mirela Simon (Boston, USA)
- 16:50-17:15h Future challenges in glioma
 surgery
 Einar Osland Vik-Mo (Oslo, Norway)
- 17:15-17:40h Future challenges in spine
 and spinal cord surgery
 Andreas Demetriades [ONLINE]
 (Edinburgh, UK)
- 17:40-18:05h What are the surgeon's
 expectations of an IONM guided
 surgical case?
 Opportunities and pitfalls.
 Francesco Sala (Verona, Italy)
 Kathleen Seidel (Bern, Switzerland)
- 18:05-18:30h What are the neurophysiologist's
 expectations of an IONM-guided
 surgical case?
 Opportunities and pitfalls.
 Stanley Skinner (Minneapolis, USA)
- 18:30-18:55h Developing a new
 neurophysiologist-surgeon
 language in the OR:
 correct phrasing
 Isabel Fernandez-Conejero
 (Barcelona, Spain)
 Pau López Ojeda (Barcelona, Spain)
- 18:55-19:20h Discussion
- 19:20-20:20h **WELCOME RECEPTION**

SCIENTIFIC PROGRAM - CONGRESS PROGRAM

FRIDAY, NOVEMBER 8th, 2024

	Paired stimulation protocols	12:20-13:05h	Sponsored Symposium
	Moderators: Josep Valls-Sole (Barcelona, Spain) Maria J. Tellez (New York, USA)		NeuroExplorer 8- Gain insides into our newest software Nina Sitt Christin Turck Pablo Alvarez Abut
08:00-08:25h	Physiology and pathways behind Modulation, Conditioning, and PrePulse Inhibition		
	Josep Valls-Solé (Barcelona, Spain)		
08:25-08:50h	Pair stimulation protocols for Motor cortex modulation	13:05-14:05	Sponsored Lunch break
	John Rothwell (London, UK)		
08:50-09:15h	Cerebello-cortical (and beyond) conditioning-test stimulus under general anesthesia: proof of concept	14:10-15:10h	Oral abstracts: go to page 26
	Davide Giampiccolo (London, UK)		GROUP A (AUDITORIUM)
09:15-09:40h	Discussion		Moderators: Gea Drost (Groningen, Netherlands) Gemma Pérez-Fajardo (Córdoba, Spain)
09:40-10:10h	Coffee break		GROUP B (ROOM1)
			Moderators: Ana Mirallave Pescador (London, UK) M Angeles Sánchez Roldan (Barcelona, Spain)
	Cranial Nerves		Navigating the Roads of Motor Responses
	Moderators: Andrea Szelényi (Munich, Germany) Ana Mirallave-Pescador (London, USA)		Moderators: Sedat Ulkatan (New York, USA) Andrea Szelényi (Munich, Germany) Klaus Novak (Wien, Austria)
10:10-10:35h	Clinical features and surgical correlation of the lateral spread and the blink reflex in the hemifacial spasm and trigeminal neuralgia	15:20-15:45h	MEPs are not all the same in the dark: MEP nuances and D-wave role in Brain and Spinal cord surgeries
	Isabel Fernandez-Conejero (Barcelona, Spain)		Andrea Szelényi (Munich, Germany)
10:35-11:00h	Neurophysiological navigation of the Trigeminal nerve system and Accessory nerve mapping for surgery guidance	15:45-16:10h	Can we apply knowledge about traumatic spinal cord injuries and neuroprotective interventions in surgery and IONM?
	Marc Sindou (Marseille, France)		Michael Fehlings (Toronto, Canada)
11:00-11:25h	Larynx in vocalization and speech		[ONLINE]
	Maria J. Tellez (New York, USA)	16:10-16:35h	Goals and methods for mapping subcortical and spinal cord areas
11:25-11:50h	Extraocular cranial nerve neuromonitoring		Kathleen Seidel (Bern, Switzerland)
	E Matthew Hoffman (Rochester, USA)		
11:50-12:15h	Discussion		

SCIENTIFIC PROGRAM - CONGRESS PROGRAM

FRIDAY, NOVEMBER 8th, 2024

- 16:35-17:00h Impact of Intraoperative monitoring for lumbosacral nerve root function... unrealistic expectations?
W Bryan Wilent (Pennsylvania, USA)
- 17:00-17:25h Discussion

17:35-18:40h **ISIN GENERAL ASSEMBLY**

- ISIN NETWORKING EVENT 2024**
(not included in the registration fee)
- 19:45h Bus depart from the Hotel NH Constanza
- 20:15h Restaurant Xalet de Montjuic
Avinguda Miramar, 31, Barcelona

SCIENTIFIC PROGRAM - CONGRESS PROGRAM

SATURDAY, NOVEMBER 9th, 2024

IONM Evidence module

Moderators:

Robert N. Holdefer (Seattle, USA)
 Stanley Skinner (Minneapolis, USA)

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, South Korea)
 Mirela Simon (Boston, 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

Moderators:

SCREEN 1

Francisco Soto (Santiago, Chile)
 Mirela Simon (Boston, USA)

SCREEN 2

Silvia Mazzali Verst (São Paulo, Brazil)
 M Angeles Sánchez Roldan
 (Barcelona, Spain)
 Davide Giampiccolo (London, UK)

SCREEN 3

Kyung-Seok Park (Seoul, South Korea)
 Kathleen Seidel (Bern, Switzerland)
 Beatriz Arranz (Murcia, Spain)

Brain Modulation and Functional Neurosurgery

Moderators:

Jay Shils (Chicago, USA)
 Mirela Simon (Boston, USA)

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, Spain)
- Sedat Ulkatan (New York, USA)
- Javier Urriza (Pamplona, Spain)

Open microphones for the Audience

13:50-14:00h

CLOSURE

Present President ISIN
 Kathleen Seidel (Bern, Switzerland)
 Past President ISIN
 Sedat Ulkatan (New York, USA)
 Local host
 Isabel Fernandez-Conejero
 (Barcelona, Spain)

ORAL PAPERS

Thursday, 7th November 2024
AUDITORIUM: 14:15h – 15:25h

ORAL PAPERS

#56 - Oral

THE CORTICOSPINAL TRACT CONTINUOUS DYNAMIC MAPPING AIDED TOTAL RESECTION OF MOTOR ELOQUENT BRAIN TUMORS: ALONE BUT NOT ALONE

Paola Lanteri, Valentina Catanzaro, Mikael GianAndrea Izzo, Daniele Cazzato, Davide Rossi Sebastiano, Ramona Togni, Ylenia Melillo, Sara Alverà, Cecilia Casali, Francesco Dimeco
Fonazione IRCCS Istituto Neurologico Carlo Besta, Milan, Italy

#51 - Oral

CONVERGENT CAUSAL MAPPING OF THE FRONTAL NETWORKS FOR VISUOSPATIAL SELECTIVE ATTENTION

Guglielmo Puglisi, Luca Viganò, Antonella Leonetti, Marco Rossi, Tommaso Sciortino, Marco Conti Nibali, Lorenzo Gabriel Gay, Luca Fornia, Gabriella Cerri, Lorenzo Bello
Università degli studi di Milano, Milano, Italy

#41 - Oral

MOTOR TRACT DISTANCE DEPENDENT ACCURACY DIFFERENCES DURING CONTINUOUS DYNAMIC MOTOR MAPPING

Marianne Cecilie Johansen Nævra, Awais A. Mughal, Ketil Berg Olsen, Einar O. Vik-Mo, Lars Etholm
Oslo University Hospital, Oslo, Norway

#34 - Oral

UNBLACKBOXING THE DECISION-MAKING PROCESS OF ARTIFICIAL INTELLIGENCE ALGORITHMS FOR MEP CLASSIFICATION BY MUSCLE TYPE

Qendresa Parduzi^{1,2,3}, Jonathan Wermelinger³, Simon Koller⁴, Murat Sariyar⁴, Ulf C. Schneider², Andreas Raabe³, Kathleen Seidel³

1. Graduate School for Health Sciences, University of Bern, Bern, Switzerland
2. Department of Neurosurgery, Lucerne Cantonal Hospital, Lucerne, Switzerland
3. Department of Neurosurgery, Inselspital, Bern University Hospital, and University of Bern, Bern, Switzerland
4. School of Engineering and Computer Science, Bern University of Applied Sciences, Biel, Switzerland

#25 - Oral

MAPPING STRATEGIES FOR RESECTION OF RADIOSURGICALLY TREATED METASTASES WITHIN THE PRIMARY MOTOR CORTEX

Alberto Luigi Gallotti^{1,2}, Marco Conti Nibali², Marco Rossi^{3,2}, Tommaso Sciortino², Lorenzo Gabriel Gay², Guglielmo Puglisi^{3,2}, Antonella Leonetti^{3,2}, Gaia Piperno⁴, Daniela Alterio⁴, Annamaria Ferrari⁴, Marta Lamperti², Vincenzo Callipo², Barbara Jereczek⁴, Lorenzo Bello^{1,2}

1. Department of Oncology and Hemato-Oncology, University of Milan, Milan, Italy
2. Neurosurgery Unit, IRCCS Ospedale Galeazzi Sant'Ambrogio, Milan, Italy
3. Department of Medical Biotechnology and Translational Medicine, University of Milan, Milan, Italy
4. Department of Radiation Therapy, European Institute of Oncology (IEO), Milan, Italy

#15 - Oral

INFLUENCE OF ELOQUENT BRAIN TUMORS ON EXCITABILITY OF THE PRIMARY MOTOR CORTEX

Jonathan Wermelinger¹, Katharina Lutz¹, Hanna Lenggenhager², Kathleen Seidel¹

1. Department of neurosurgery, Inselspital, Bern, Switzerland
2. Faculty of medicine, University of Bern, Bern, Switzerland

#12 - Oral

WHITE MATTER STIMULATION WITH SEEG IDENTIFIES PATHWAY FOR MULTIMODAL SEMANTIC CONTROL

Davide Giampiccolo, Lawrence Binding, Andrew Mcevoy, John Duncan, Beate Diehl, Anna Misericocchi, Fahmida Chowdhury

UCL Queen Square Institute of Neurology, London, United Kingdom

Thursday, 7th November 2024
 ROOM 1: 14:15h – 15:25h

ORAL PAPERS

#58 - Oral

CORTICO-CORTICAL EVOKED POTENTIAL RECORDINGS OF LANGUAGE TRACTS IN PEDIATRIC PATIENTS DURING EPILEPSY SURGERY

Alejandra Climent Perin¹, Martina Sedo Parellada², Laia Banyuls Salellas³, Cristiano Parisi⁴, Santiago Candela Canto¹, Diego Ramon Perez Rodriguez¹, Marta Cecilia Flores¹, Jordi Rumia Arboix⁵

1. Hospital Sant Joan de Deu, Barcelona, Spain
2. Universitat Politècnica Catalunya, Barcelona, Spain
3. Hospital Sant Joan de Deu, Barcelona Spain, Barcelona, Spain
4. Ospedale San Bartolo, Vincenza, Italy
5. Hospital Clinic, Barcelona, Spain

#52 - Oral

INTRAOPERATIVE ASSESSMENT OF PREMOTOR-MOTOR CORTICO-CORTICAL CONNECTIVITY WITH A DUAL-STIMULATION TECHNIQUE

Sonia E Q Nunes¹, Luigi Cattaneo², Davide Giampiccolo³, Federica Basaldella⁴, Andrea Badari⁴, Giovanna Squintani⁴, Francesco Sala¹

1. University of Verona, Verona, Italy
2. University of Trento, Trento, Italy
3. University College of London, London, United Kingdom
4. University Hospital of Verona, Verona, Italy

#38 - Oral

USEFULNESS OF CORTICO-CORTICAL EVOKED POTENTIALS DURING TUMOR RESECTION SURGERY FOR INTRAOPERATIVE MONITORING OF LANGUAGE FUNCTION IN ANESTHETIZED PATIENTS

Nuria Acuña, Andrés Rojas, Lorena Vega-Zelaya, Jesús Pastor
 Clinical Neurophysiology, Hospital Universitario La Princesa, Madrid, Spain

#37 - Oral

MAPPING OF LANGUAGE FUNCTION BY CORTICO-CORTICAL EVOKED POTENTIALS DURING ASLEEP PROCEDURES

Christa Pachatz, Maria Giuseppina Palmieri, Federica Novegno, Andrea Iaquinandi, Gaia Cola, Fabrizio Cum, Raffaella Ludovisi, Alessandro Pesce, Nicola Biagio Mercuri, Maurizio Salvati
 Polyclinic Tor Vergata, Rome, Italy

#22 - Oral

INTRA-PRECENTRAL WHITE MATTER CONNECTIVITY: AN ELECTROPHYSIOLOGICAL VALIDATION

Luca Viganò¹, Luca Fornia¹, Lorenzo Bello², Gabriella Cerri¹

1. MoCA Laboratory, Department of Medical Biotechnology and Translational Medicine, University of Milan, IRCCS Galeazzi Sant'Ambrogio, Milan, Italy
2. Neurosurgical Oncology Unit, Department of Oncology and Haemato-Oncology, University of Milan, IRCCS Galeazzi Sant'Ambrogio, Milan, Italy

#16 - Oral

CCEPS REVEAL THE SUBSTRATE FOR VENTRAL PREMOTOR TO PRIMARY MOTOR CORTEX INTERACTION IN HAND CONTROL

Marta Lamperti¹, Vincenzo Callipo¹, Lorenzo Gabriel Gay¹, Alberto Gallotti^{1,2}, Luca Fornia³, Lorenzo Bello^{1,2}, Gabriella Cerri^{1,3}

1. I.R.C.C.S Ospedale Galeazzi Sant'Ambrogio, Milano, Italy
2. Department of Oncology and Emato-oncology, Università degli Studi di Milano, Milano, Italy
3. Department of Medical Biotechnology and Translational Medicine, Università degli Studi di Milano, Milano, Italy

#4 - Oral

A CONDITIONING STIMULATION TECHNIQUE FOR THE ENHANCEMENT OF TRANSCRANIALLY ELICITED CORTICOBULBAR MOTOR EVOKED POTENTIALS.

Júlia Miró Lladó, Jose Luis Sanmillan, Guillermo Martin, Laura Contreras, Alberto Torres, Isabel Fernández-Conejero
 Bellvitge University Hospital, Barcelona, Spain

Friday, 8th November 2024
AUDITORIUM: 14:10h – 15:10h

ORAL PAPERS

#60 - Oral

A COMPARATIVE ANALYSIS OF TRANSCRANIAL MOTOR EVOKED POTENTIAL ALARM CRITERIA BASED ON AREA UNDER THE CURVE AND MAXIMAL PEAK-TO-PEAK AMPLITUDE AS PREDICTORS OF POSTOPERATIVE DEFICIT IN SPINE SURGERY

Scott Crosby¹, Thomas Noh², Steven Leckie³, Louis Marotti³, Lucas Niebrugge⁴, Sion Gutentag⁵, Scott Davis⁵

1. *Neuromonitoring Associates, Las Vegas, United States*
2. *University of Michigan, Ann Arbor, United States*
3. *Plymouth Bay Orthopedic Associates, Plymouth, United States*
4. *University of Louisville School of Medicine, Louisville, United States*
5. *Neuromonitoring Associates, LLC, Las Vegas, United States*

#55 - Oral

MOTOR EVOKED POTENTIAL CHANGES DURING THORACIC AND LUMBAR SPINE DEFORMITY SURGERIES

Zoran Rodi¹, Dejan Celeš², Robert Janez Cirman², Janez Mohar^{2,3}

1. *Institute of Clinical Neurophysiology, Division of Neurology, Ljubljana University Clinical Centre, Ljubljana, Slovenia*
2. *Department of Spine Surgery, Valdoltra Orthopaedic Hospital, Ankaran, Slovenia*
3. *Chair of Orthopaedics, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia*

#44 - Oral

BULVOCAVERNOUS REFLEX AND SOMATOSENSORY EVOKED POTENTIALS OF PUDENDAL NERVE AS A TOOL FOR IONM OF THE ENDOVASCULAR AORTIC REPAIR

Anna Rojas-Contreras, Daniela Santa-Cruz, María De Los Angeles Sanchez-Roldan, Anna Gonzalez, Ivan Constenla, Josep Royo, Dulce Moncho, Kimia Rahnama
Vall d'Hebron Hospital, Barcelona, Spain

#32 - Oral

INTRAOPERATIVE TRIGGERED ELECTROMYOGRAPHY FROM THE URETHRAL SPHINCTER TO IDENTIFY THE PUDENDAL NERVE IN SURGICAL RESECTION OF SCHWANNOMA ARISING FROM CONUS MEDULLARIS; A CASE REPORT

Hironobu Hayashi¹, Yasuhiro Takeshima², Tsunenori Takatani³, Masahiko Kawaguchi¹

1. *Department of Anesthesiology, Nara Medical University, Kashihara, Japan*
2. *Department of Neurosurgery, Nara Medical University, Kashihara, Japan*
3. *Division of Central Operation, Nara Medical University Hospital, Kashihara, Japan*

#29 - Oral

IONM IN COMPLEX, HIGH-RISK SPINAL DEFORMITY SURGERY: PRESENTING THE SPINAL DEFORMITY INTRAOPERATIVE MONITORING STUDY

Kimia Rahnama¹, Ferran Pellisé¹, Daniela Santa-Cruz¹, M. Ángeles Sánchez-Roldán¹, Susana Núñez¹, Sleiman Haddad¹, Lawrence G Lenke², Yong Qiu³, Ahmet Alanay⁴, Justin S Smith⁵, Nasir A Quraishi⁶, Randolph J Gray⁷, Saumyajit Basu⁸, Go Yoshida⁹, Amer Aziz¹⁰, Stephen J Lewis¹¹

1. *Hospital Vall d'Hebron, Barcelona, Spain*
2. *New York Presbyterian, Columbia University Medical Center, New York, United States*
3. *Drum Tower Hospital of Nanjing University Medical School, Nanjing, Jiangsu, China*
4. *Acibadem Mehmet Ali Aydinlar University School of Medicine, Istanbul, Turkey*
5. *University of Virginia, Charlottesville, United States*
6. *Queen's Medical Centre Campus, Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom*
7. *The Children's Hospital Westmead, St. Leonards, Australia*
8. *Kothari Medical Centre, Kolkata, India*
9. *Hamamatsu University School of Medicine, Hamamatsu, Japan*
10. *Ghurki Trust Teaching Hospital, Lahore, Pakistan*
11. *University Health Network, Toronto Western Hospital, Toronto, Canada*

#28 - Oral

IDENTIFYING BIOMARKERS IN IONM FOR ACUTE TRAUMATIC SPINAL CORD INJURY: EXPLORING THE MOTOR ASIA IMPAIRMENT SCALE AND MEP

Daniela Santa-Cruz, Susana Núñez-Pereira, Kimia Rahnama, María De Los Ángeles Sánchez-Roldán, Sleiman Haddad, Anna Rojas-Contreras, Manuel Ramírez-Valencia, Ana García De Frutos, Llúisa Montesinos-Magraner, Dulce Moncho, Ferran Pellisé

Hospital Universitari Vall d'Hebron, Barcelona, Spain

Friday, 8th November 2024
ROOM 1: 14:10h – 15:10h

ORAL PAPERS

#65 - Oral

TRANSDURAL STIMULATION FOR THE IDENTIFICATION OF A DEHISCENT GENICULATE GANGLION IN INTRADURAL MIDDLE CRANIAL FOSSA SURGERY

Sebastian Niedermeyer, Andrea Szelenyi, Christian Schichor
Department for Neurosurgery, University Hospital Munich, Munich, Germany

#53 - Oral

MULTIMODAL IONM IN OBSTETRIC BRACHIAL PLEXOPATHY: A CASE SERIES

Diego Ramón Pérez Rodríguez, Marta Cecilia Flores, Joaquim Casañas Sintés, Aritz Ortega Centol, Alejandra Climent Perin
Hospital Sant Joan de Déu, Barcelona, Spain

#45 - Oral

TRIGEMINAL BRANCHES STIMULATION ALLOWING FOR MULTILEVEL BRAINSTEM MONITORING: A REPORT OF FIVE CASES.

Denise Lima Medeiros De Melo¹, Enio Alberto Comerlato¹, Denise Spinola Pinheiro², Gilberto Mastrocola Manzano²
1. SARAH Network of Rehabilitation Hospitals, Brasília, Brazil
2. Federal University of Sao Paulo, São Paulo, Brazil

#17 - Oral

CORTICAL ACTIVITY IN RESPONSE TO STIMULATION OF THE CORTICOSPINAL TRACT IN THE SPINE: THE ANTI D-WAVE. CASE SERIES

Pablo Abel Alvarez Abut¹, Santos Nicolás Zurita Perea², Kathleen Seidel¹
1. Department of Neurosurgery, Inselspital, Bern University Hospital, and University of Bern, Bern, Switzerland
2. Department of Neurology, Hospital Privado Universitario de Córdoba, Córdoba, Argentina

#8 - Oral

EXPLORING LOCAL ANESTHETICS FOR MONITORING THE LARYNGEAL ADDUCTOR REFLEX: INSIGHTS FROM OUR PRACTICE

M. Ángeles Sánchez Roldán, Héctor Duque, Bernat Masso, Dulce Moncho, Ramón Vilallonga, Manuel Armengol, Óscar González
Vall d'Hebron University Hospital, Barcelona, Spain

#7 - Oral

A NEW METHOD OF TRANSCRANIAL ELECTRIC STIMULATION FOR TONGUE CORTICO-BULBAR EVOKED POTENTIALS

Mikael Gian Andrea Izzo, Davide Rossi Sebastiano, Valentina Catanzaro, Ylenia Melillo, Ramona Togni, Annamaria Gallone, Daniele Cazzato, Paola Lanteri
Fondazione - IRCCS - Istituto Neurologico, Milan, Italy

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November 5th, 12:50-13:35h

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November 8th, 12:20 - 13:05h

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NeuroExplorer 8- Gain insides into our newest software

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Christin Turck

Pablo Alvarez Abut

November 5th, 14:45-15:15h

NERVUS, SPES MEDICA, NEUROSOFT

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Visualization of IOM Events

Edrin Vicente

Corticobulbar MEPs:

A Challenging Technique

Alexandre Medeiros

November 5th, 15:15-15:45h

LANGER MEDICAL

Our Approach to Unique IONM

Julian Wisser

Ramona Schuler



NETWORKING EVENTS

ISIN EDUCATIONAL COURSE

Welcome Networking event

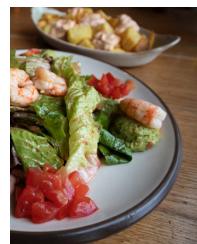
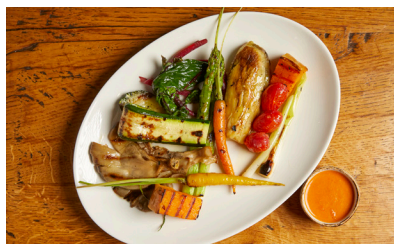
Tuesday, November 5th, 20:00h

MUSSOL RESTAURANT

Avenida Diagonal 613, Barcelona
 Walking distance from the venue
 Catalan Typical Dinner



- Included in the registration fee
- Dress code: business casual



ISIN CONGRESS

ISIN Party

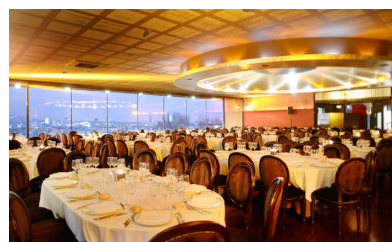
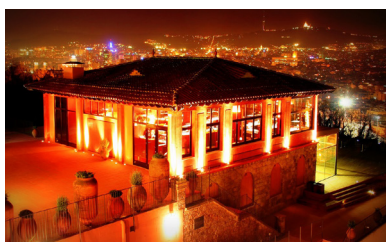
Friday, November 8th, 20:15h

Bus depart from the Hotel NH Constanza at 19:45h

EL XALET DE MONTJUÏC RESTAURANT

Avinguda Miramar, 31, Barcelona

- Not included in the registration fee - cost: 90€
- Dress code: business casual



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