

Intraoperative Neurophysiology

Essentials for Pediatric Neurosurgeons

Date	Wednesday October 7, 2026
Time	09:00 – 16:00
Venue	InterContinental Cairo Semiramis Hotel, Cairo

Learning Objectives

Upon completion of this activity, participants should be able to:

- Learn why IONM is valuable for pediatric neurosurgeons.
- Understand the essentials of IONM techniques.
- Learn how to use IONM in various pediatric neurosurgical scenarios.
- Understand the challenges in neurophysiological monitoring in pediatric neurosurgery.

Course Director

F. Sala
Verona University Hospitals

Course Faculty

(alphabetically arranged)

F. Basaldella

Verona University Hospitals

J. Clemente Perin

Sant Joan de Déu Barcelona Children's Hospital

S. Constantini

Dana Children's Hospital

S. Hussein

Children's Cancer Hospital Egypt (CCHE-57357)

G. Jallo

Johns Hopkins All Children's Hospital

I. Jankovic

Great Ormond Street Hospital (GOSH)

N. Morota

Kitasato University Hospitals

F. Rusciano

Integrated University Hospital of Verona: AOUI

G. M. Squintani

Integrated University Hospital of Verona: AOUI

D. Thompson

Great Ormond Street Hospital (GOSH)

Course Program

08:00 09:00

Registration

09:00 09:45

Session 1

The "Who is Who" in the OR during a neuromonitoring procedure

09:00 09:05 Welcome & Introduction

09:05 09:20 The Neurosurgeon: Why IONM is valuable for pediatric neurosurgeons

09:20 09:25 Discussion

09:25 09:40 The Anesthesiologist: Pills of IONM-tailored anesthesia

09:40 09:45 Discussion

09:45 10:00 The Neuromonitoring Professional: your best friend

10:00 10:05 Discussion

10:05 13:00

Session 2

Essentials of IONM Techniques

10:05 10:20 SEPs and dorsal column mapping

10:20 10:25 Discussion

10:25 10:40 Phase reversal, cortical and subcortical motor mapping

10:40 10:55 Discussion

10:55 11:20

Coffee Break

11:20 11:35 Monitoring motor pathways: Muscle MEPs, and D-wave

11:35 11:40 Discussion

11:40 11:50 Corticobulbar MEPs

11:50 12:05 Brainstem and motor cranial nerve mapping

12:05 12:10 Discussion

12:10 12:25 Monitoring the laryngeal abductor and other brainstem reflexes

12:25 12:30 Discussion

12:30 12:40 Monitoring the bulbocavernosus and bladder-anal reflex

12:40 12:55 Sensory and motor mapping of the cauda equina

12:55 13:00 Discussion

13:00 13:30

Lunch Break

13:30 16:10

Session 3

Pediatric Neurosurgical Scenarios

13:30 13:45 Challenges in neurophysiological monitoring in pediatric neurosurgery

13:45 13:50 Discussion

13:50 14:05 How to use IONM during brain tumor surgery

14:05 14:10 Discussion

14:10 14:25 How to use IONM during posterior fossa surgery

14:25 14:30 Discussion

14:30 14:45 How to use IONM during CVJ and spinal cord surgery

14:45 14:50 Discussion

14:50 15:05 How to use IONM during surgery of the conus-cauda

15:05 15:10 Discussion

15:10 16:00 **Practical Workshop**