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Workshop

EEGW**Safe Brain Initiatives****EEG Boot-Camp for Anaesthesia and Intensive Care******IMPORTANT NOTICE:** access to this workshop is limited to pre-registered delegates

About this session: EEG monitors, utilised to gauge the adequacy of hypnosis during anaesthesia, have grown increasingly prevalent. Yet, the medical staff specialising in anaesthesia often need to pay more attention to and better understand the wealth of information available through the EEG. This information is provided as raw traces, density spectral arrays, or processed EEG parameters or indices and can be used to optimise anaesthesia navigation if interpreted correctly. The main focus when using EEG-based monitoring is often on the heavily processed indices alone. However, this processed data merely provides a partial and incomplete perspective of the comprehensive EEG information. For a thorough comprehension of the EEG-derived indices, it is crucial to grasp the interaction between the raw EEG readings and the derived parameters throughout the anaesthesia process. Only if the full information provided by the monitoring systems is exploited, we can reliably optimise anaesthesia navigation.

**Monday****27 May 2024****09:00 – 13:00****Room 2**

This course aims to assist participants in acquiring a basic understanding of the EEG, its sub-parameters, and processed EEG values. We will focus on how the provided information can be used to create a patient-centred and brain-protective framework in everyday clinical scenarios. The course will cover topics ranging from electrode placement to EEG interpretation and troubleshooting, with a strong emphasis on interactive learning and practical application.

Target audience: *Anaesthesia physicians and nurses interested in the field.*

Chair: Finn Radtke (Nykoebing, Denmark)

Co-Chair: Matthias Kreuzer (Munich, Germany)

09:00–09:05 Welcome and introduction

Speaker: Matthias Kreuzer (Munich, Germany)

Speaker: Finn Radtke (Nykoebing, Denmark)

PART I**09:05–09:25 Understanding the need for perioperative electroencephalography (EEG)**

Speaker: Finn Radtke (Nykoebing, Denmark)

Speaker: Susanne Koch (Berlin, Germany)

**09:25–09:45 Implementing EEG - Theoretical framework & practical demonstration:
Electrode utilisation, impedance, hardware, filters and beyond**

Speaker: Matthias Kreuzer (Munich, Germany)

Speaker: Janna D. Lendner (Tübingen, Germany)

**09:45–10:05 Interpreting EEG: from neuroanatomy to index analysis**

Speaker: Susanne Koch (Berlin, Germany)

Speaker: Martin Soehle (Bonn, Germany)

**10:05–10:25 Anaesthesia: profiling the ideal EEG patient -
From baseline to Post-Anaesthesia Care Unit (PACU) (hands-on video case study)**

Speaker: Falk von Dincklage (Greifswald, Germany)

Speaker: Finn Radtke (Nykoebing, Denmark)

10:25–10:35 BREAK**PART II – Interactive case study sessions: EEG in anaesthesia****10:35–10:50 DECODING THE NOISE: Understanding artifacts and more**

Speaker: Janna D. Lendner (Tübingen, Germany)

Speaker: Matthias Kreuzer (Munich, Germany)

10:50–11:05 NAVIGATING VARIABILITY: The impact of medications on EEG signatures

Speaker: Janna D. Lendner (Tübingen, Germany)

Speaker: Susanne Koch (Berlin, Germany)

11:05–11:20 CARE FOR THE ELDERLY: EEG observations in geriatric patients and burst suppression phenomena

Speaker: Susanne Koch (Berlin, Germany)

Speaker: Finn Radtke (Nykoebing, Denmark)

11:20–11:35 AROUSAL CONCERNS: Alpha loss, pain, and movement

Speaker: Falk von Dincklage (Greifswald, Germany)

Speaker: Matthias Kreuzer (Munich, Germany)

11:35–11:50 THE DELTA CHALLENGE: Persistence of delta waves

Speaker: Matthias Kreuzer (Munich, Germany)

Speaker: Martin Soehle (Bonn, Germany)

11:50–12:00 YOUNG PATIENTS: EEG in paediatric cases, age-specific considerations

Speaker: Susanne Koch (Berlin, Germany)

Speaker: Martin Soehle (Bonn, Germany)

12:00–12:10 CRITICAL CARE: The role of EEG in Intensive Care Units (ICU)

Speaker: Falk von Dincklage (Greifswald, Germany)

Speaker: Finn Radtke (Nykoebing, Denmark)

12:10–12:20 BREAK



BRAIN

Neuroanaesthesiology and Intensive Care
Learning Track 3.1



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2024

WORKSHOP SEGMENTS (Workstations)

12:20–12:30 1 - Maximising your monitor: tips and techniques

Facilitator: Janna D. Lendner (Tübingen, Germany)

Facilitator: Falk von Dincklage (Greifswald, Germany)

12:30–12:40 2 - Signals and artifacts: a quiz challenge

Facilitator: Matthias Kreuzer (Munich, Germany)

Facilitator: Susanne Koch (Berlin, Germany)

12:40–12:50 3 - Video clinical immersion: witness EEG in real-time action

Facilitator: Finn Radtke (Nykoebing, Denmark)

Facilitator: Martin Soehle (Bonn, Germany)

12:50–13:00 Course wrap-up and future perspectives