



2024 SPRING SEMINAR



March 9th, 2024

University of Pittsburgh – Scaife Hall, Room 3785 & 4795

3550 Terrace St. Pittsburgh, PA 15261

Overview and Learning Objectives:

This seminar is comprised of two tracks: Comprehensive Neurodiagnostics and Intraoperative Neuromonitoring (IONM).

Intraoperative Neuromonitoring: Attendees in the IONM course will learn about various monitoring modalities, equipment, troubleshooting, and best practices to enhance patient safety and optimize surgical outcomes. The day will end with an interactive case studies session which will immerse individuals in realistic scenarios, promoting active participation, encouraging critical thinking, fostering collaboration, and enhancing problem-solving skills.

Comprehensive Neurodiagnostics: Attendees will have the opportunity to deepen their knowledge in neurodiagnostic technology, with topics relevant to EEG/LTM, EMG and MEG. This course is a great way to stay current with advancements in the field, improve skills, and connect with others in the neurodiagnostic community.

Who Should Attend:

The Comprehensive Neurodiagnostics track is designed primarily for Neurologists, neurocritical care specialists, psychiatrists, neurosurgeons, internal medicine and family practice physicians, advance practice providers, technologists, and trainees in these disciplines.

The IONM track is designed for advanced professionals performing or involved in intraoperative neuromonitoring including but not limited to neurologists, PM&R physicians, anesthesiologists, board certified neurophysiologists, senior neurophysiology technologists, and neurological, orthopedic, vascular and ENT surgeons

Course Directors:

Parthasarathy Thirumala, MD, MS

Professor of Neurology

Title(s)

- Vice Chair, Quality & Safety
- Director, Center of Clinical Neurophysiology

Biographical Sketch

Parthasarathy Thirumala, MD, specializes in intraoperative neurophysiological monitoring to adult and pediatric neurosurgical, orthopedic, ENT, vascular and interventional neuroradiology procedures. His clinical and research interests include intraoperative neurophysiological monitoring during expanded endonasal approach, functional cortical mapping during awake craniotomies, ICU EEG. He has published over 90 peer reviewed articles, book chapters, and invited articles in the journals including JAMA, Neurology, Neurology, Neurosurgery, Journal of Neurosurgery, and Journal of Clinical Neurophysiology. He has given lectures both nationally and internationally on the value of intraoperative neurophysiological monitoring.



Vijayalakshmi Rajasekaran, MD

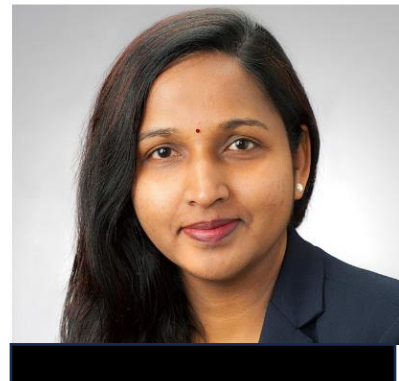
Associate Professor of Neurology

Title(s)

- Director, UPMC Presbyterian EEG Laboratory
- Program Director, Clinical Neurophysiology Fellowship
- Associate Program Director, Epilepsy Fellowships

Biographical Sketch

Dr. Rajasekaran's clinical interest focus is on intractable epilepsy patients and their treatment modalities that include medical management, surgery, and VNS/RNS. Her research interest is focused on intractable epilepsy, personalized medicine, seizure comorbidities and nonepileptic spells. She has a special interest in teaching and mentoring the budding epileptologist such as clinical fellows, residents, and medical students.



Claiming Credits: Physicians

For those seeking CME credit and a certificate of attendance, please follow these instructions to create an account with UPMC's Center for Continuing Education in Health Sciences (CCEHS) and complete the surveys *do not do this if you need ASET CEUs*. **MUST BE SUBMITTED BEFORE MARCH 24th, 2024**

If new user: Create an account at: <http://cce.upmc.com/>

Step 1: Record your attendance:

- Go to <http://cce.upmc.com/code>
- Login to your account
- Enter code: **WEYZOR**

Step 2: Complete the course evaluation

- Go to My Account, My Courses, Choose Pending Activities
- Click on the course title then click the register/complete course button to complete the course evaluation

Certificates will be available to download and stored for future reference

Course Faculty:

IONM Track:

Nitin Agarwal, MD – University of Pittsburgh Department of Neurological Surgery

Ted Andrews, MD - University of Pittsburgh Department of Neurological Surgery

Katherine Anetakis, MD – University of Pittsburgh Department of Neurological Surgery

Jeffrey Balzer, PhD – University of Pittsburgh Department of Neurological Surgery

Paul Gardner, MD – University of Pittsburgh Department of Neurological Surgery

Shane Gordon, CNIM - Procirca Center for Clinical Neurophysiology

Bradley Gross, MD – University of Pittsburgh Department of Neurological Surgery

Carly Kleynen, CNIM – Procirca Center for Clinical Neurophysiology

Rahul Panat, PhD – Carnegie Mellon University

Jeremy Shaw, MD – University of Pittsburgh Department of Orthopedic Surgery

Natalie Sherry, PsyD – University of Pittsburgh Department of Neurological Surgery

R. Joshua Sunderlin, MS, CNIM – Procirca Center for Clinical Neurophysiology

Partha Thirumala, MD – University of Pittsburgh Department of Neurological Surgery

Comprehensive Neurodiagnostics Track:

Anto Bagić, MD, PhD - University of Pittsburgh Department of Neurology

Patrick Coppler, PA-C – University of Pittsburgh Department of Critical Care Medicine

Joanna Fong-Isariyawongse, MD - University of Pittsburgh Department of Neurology

Mick Heim, R. EEG T. - Procirca Center for Clinical Neurophysiology

Patricia Lordeon, R. EEG T, FASET – UPMC Epilepsy Monitoring Unit

Andrew Moyer, CNIM – Procirca Center for Clinical Neurophysiology

Christina Patterson, MD – UPMC Children’s Hospital Division of Child Neurology

Andre Pereira, BS, R. EEG T. – UPMC Magnetoencephalography Program

Vijayalakshmi Rajasekaran, MD - University of Pittsburgh Department of Neurology

Maise Ruble, BS, R EEG T. - Procirca Center for Clinical Neurophysiology

Joshua Smith, DO - University of Pittsburgh Department of Neurology

Fang Sun, MD - University of Pittsburgh Department of Neurology

Course Schedule: IONM – Scaife 4795

7:30A – 8:20A	Registration and Continental Breakfast
8:20A – 8:30A	Welcome and Announcements R. Joshua Sunderlin, MS, CNIM
8:30A – 9:00A	IONM The History and Physiological Basis Partha Thirumala, MD
9:00A – 9:45A	SSEP Fundamentals and troubleshooting Carly Kleynen, CNIM
9:45A – 10:30A	TcMEP Fundamentals and troubleshooting Shane Gordon, CNIM
10:30A – 10:45A	BREAK (15 Minutes)
10:45A – 11:15A	IONM for Spine Trauma Procedures Jeremy Shaw, MD
11:15A – 11:45A	IONM for Adult Spinal Deformity Procedures Nitin Agarwal, MD
11:45A – 12:30P	LUNCH BREAK (45 Minutes)
12:30P – 1:00P	Augmented Reality and its role in Medical Education Ted Andrews, MD
1:00P – 1:30P	Skull base procedures and the role of IONM Paul Gardner, MD
1:30P – 2:00P	Language Mapping for Awake Craniotomy Natalie Sherry, PsyD
2:00P – 2:15	BREAK (15 Minutes)
2:15P – 2:45P	IONM for Cardiovascular procedures Katherine Anetakis, MD
2:45P – 3:15P	High-density 3D neural probes via additive manufacturing Rahul Panat, PhD
3:15P – 3:45P	Neurointerventional Procedures and the Role of IONM Bradley Gross, MD
3:45P – 4:00P	BREAK (15 Minutes)
4:00P – 5:00P	Interactive Case Studies R. Joshua Sunderlin, MS, CNIM & Jeffrey Balzer, PhD
5:00P	Course Adjournment

Course Schedule: Comprehensive Neurodiagnostics – Scaife 3785

7:30A – 8:20A	Registration and Continental Breakfast
8:20A – 8:30A	Welcome and Announcements
8:30A – 9:00A	Encephalopathy vs. Epileptiform Vijayalakshmi Rajasekaran, MD
9:00A – 9:30A	Updated ACNS Terminology – Commonly Misunderstood Concepts Joanna Fong, MD
9:30A – 10:00A	Introduction to Neuromuscular Ultrasound Joshua Smith, DO
10:00A – 10:15A	BREAK (15 Minutes)
10:15A – 10:45A	Common Ictal Patterns Vijayalakshmi Rajasekaran, MD
10:45A -11:15A	The Utility of cEEG in Post Cardiac Arrest Patrick Coppler, PA-C
11:15A-11:45A	Stimulation and Reactivity Patricia Lordeon, R. EEG T.
11:45A – 12:30P	LUNCH BREAK (45 Minutes)
12:30A – 1:00P	Friedreich’s Ataxia Joshua Smith, DO
1:00P – 1:30P	Neonate EEG Terminology and Syndromes Christina Patterson, MD
1:30P – 2:00P	Lennox-Gastaut Syndrome Mick Heim, BS, R. EEG T.
2:00P – 2:15P	BREAK (15 Minutes)
2:15P – 2:45P	Neuromuscular Junction Disorders Fang Sun, MD
2:45P – 3:15P	Intracranial Hemorrhage and cEEG Findings Maisie Ruble, BS, R. EEG T.
3:15P –3:45P	Cortical-Cortical Evoked Potentials Andrew Moyer, CNIM
3:45P – 4:00P	BREAK (15 Minutes)
4:00P – 4:30P	Demystifying the Logistics of MEG Andre Pereira, BS, R. EEG T.
4:30P – 5:00P	Reversing an Underutilization of Epilepsy Surgery with MEG? Anto Bagic, MD, PhD
5:00P	Course Adjournment

Faculty Disclosure

All individuals in a position to control the content of this education activity have disclosed all financial relationships with any companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

All of the relevant financial relationships for the individuals listed below have been mitigated:

Nitin Agarwal, MD: Other: Royalties – Thieme Medical Publishers; Springer International Publishing

Paul Gardner, MD: Consultant – SPIWay, LLC (ownership interest); Royalties – Peter Lazic US, Inc.

Bradley Gross, MD: Consultant – Medtronic, Microvention

Vijayalakshmi Rajasekaran, MD: Involved in study with no monetary support – UCB Praxel, Xenon Pharmaceuticals

Jeremy Shaw, MD: Grant/Research Support: AOSpine (Fellowship support), CSRS; Consultant: Purgo Scientific LLC, Haima Therapeutics LLC; Stockholder (Privately held): Purgo Scientific LLC

Fang Sun, MD: Consultant: Argenx

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Accreditation and Designation

In support of improving patient care, the University of Pittsburgh is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Physician (CME)

The University of Pittsburgh designates this live activity for a maximum of 7.0 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Other Healthcare Professionals:

Other health care professionals will receive a certificate of attendance confirming the number of contact hours commensurate with the extent of participation in this activity.

ASET CEUs

ASET – The Neurodiagnostic Society has granted 6.5 Continuing Education Units [ASET-CEUs] for this program. Such crediting, however, should not be construed by program participants as an endorsement of any type of instruments or supplies mentioned or involved in these presentations.