

CURRICULUM VITAE

Last Updated: Feb 14th, 2023

FAISAL RIAZ JAHANGIRI **MD, CNIM, D.ABNM, FASN, FASET**

**Assistant Professor of Instruction, Department of Neuroscience,
School of Behavioral & Brain Sciences
The University of Texas at Dallas, Richardson, TX**

**President & CEO, Global Innervation LLC
Director, IONM Fellowship/Diploma Programs**

Diplomate, American Board of Neurophysiological Monitoring
Fellow, American Society of Neurophysiological Monitoring (ASNM)
Fellow, Neurodiagnostic Society
Mini-Fellowship, Movement Disorders, UNMC, NE
Adjunct Instructor, College of Health Sciences, Rush University, IL
Adjunct Professor, Labouré College of Healthcare, Milton, MA
Associate Editor, ASET Neurodiagnostic Journal
Chair, ASNM Membership Committee

Board Member-at-Large, ASNM
Past President, ASNM, 2021-22

Previous

Senior Consultant, Dept. of Neurosurgery, Hamad Medical Corporation, Doha, Qatar
Consultant, Dept. of Neurology, King Abdul-Aziz Medical City, Riyadh, Saudi Arabia
Vice President of Clinical Affairs, Axis Neuromonitoring, Richardson, Texas
President-Elect, ASNM, 2019-20
President, ASNM, 2020-21

Office: JO 3.108
Work: 972-883-3830

E-mail: Faisal.Jahangiri@UTDallas.Edu

SUMMARY

I am currently serving as President and CEO of Global Innervation LLC in Dallas, Texas. Our mission is to educate about Intra-Operative Neurophysiological Monitoring, commonly referred to as IONM, to reduce the chances of neurological deficits during surgery. Our services range from basic-level consulting to intensive training about IONM, inside or outside the OR. We also provide help in authoring or editing technical manuscripts related to IONM. Advise and educate hospitals and companies on all aspects of IONM, including surgical planning, anesthesia, intraoperative patient evaluation, programming, troubleshooting, remote monitoring, etc. I am available online for assistance and troubleshooting complex brain mapping, brainstem, spine, and peripheral nerve surgeries. I have recently (2020) completed a Mini-Fellowship in Movement Disorders from the department of neurological sciences, University of Nebraska. I have also developed and currently teaching six months of online Diploma and Postdoctoral Fellowship in Surgical Neurophysiology. I am also an Assistant Professor of Instruction, Dept. of Neuroscience at the University of Texas at Dallas, Labouré College of Healthcare, and Rush University. I was elected as President-Elect for the American Society of Neurophysiologic Monitoring (ASNM) for 2019-20, President 2020-21, and currently immediate Past-President for the 2020-21 term.

Recently, I worked as Vice President of Clinical Affairs at Axis Neuromonitoring LLC in Dallas, Texas. I was responsible for improving the quality of service provided to our patients and surgeons by training and supervising technologists for basic and advanced Intraoperative Neurophysiological Monitoring (IONM) modalities. My responsibilities included clinical services, quality assurance, remote oversight support, education, training, and research. Previously, I worked as a Consultant (Attending) Clinical Neurophysiologist in the Division of Neurology, Dept. of Medicine at King Abdul-Aziz Medical City, Ministry of National Guard Health Affairs in Riyadh, Saudi Arabia. It is one of the largest tertiary care medical centers (including only children's hospitals) in the middle east/Arabian Gulf region. In addition, I worked on establishing IONM programs in Riyadh and Jeddah, Saudi Arabia. I provided physician oversight and neurophysiological services for a wide range of neurosurgical, spine, ENT, and interventional cases ranging from language mapping and brain mapping to brain tumors, spinal cord monitoring, thyroid tumors, spinal embolization, tethered cord releases, etc. Later, I worked as a Senior Consultant Neurosurgery, Dept. of Neuroscience at Hamad Medical Corporation (HMC) in Doha, Qatar. I am also President and CEO of Global Innervation LLC and provide independent consultation to various IONM and medical device companies in the USA and Internationally.

After completing my medical school at Khyber Medical College (now Khyber Medical University) in Pakistan and training in general surgery and radiology, I completed graduate studies in Biomedical Engineering at Case Western Reserve University (CWRU) in Cleveland, Ohio, USA. My research included Functional Electrical Stimulation (FES), EEG, and 3-D imaging for Plastic reconstructive surgery. I have also taught in the schools of Medicine and Dentistry at CWRU at the graduate level. Over the past two decades, I have worked as a senior clinical neurophysiologist and trainer with some premier IONM companies in the United States. I have performed and supervised more than 8000 surgical procedures in more than 300 hospitals across 20 states in the USA. I have expertise in setting up new IONM programs, monitoring onsite and remotely during neurosurgical, orthopedic, otolaryngology (ENT), vascular surgeries, as well as interventional procedures, monitoring in intensive care units (ICU), and epilepsy monitoring units (EMU).

In Jan 2003, I became board certified/Diplomate by the American Board of Neurophysiological Monitoring (D.ABNM). I was awarded a fellowship by the American Society of Neurophysiological Monitoring (ASNM) in May 2013 (FASNM) and by ASET American Neurodiagnostic Society in Aug 2019 (FASET). I have multiple research publications and have been invited as a guest speaker at various national and international conferences. I am actively involved with ASNM, ASET, ISIN, SSET, and APPNA MERIT (Association of Physicians of Pakistani Descent of North America - Medical Education & Research International Training & Transfer of Technology) program. I was elected and served as a chairman of the ASNM membership committee from 2013-19. I am a reviewer for American neurophysiological journals and a European spine journal.

I am also actively involved in philanthropic efforts for IONM in underdeveloped countries. International governments invited me to visit multiple public and private medical centers and introduce IONM. I have been a course director for various US and international IONM meetings and workshops. I have published more than 40 peer-reviewed research papers, multiple book chapters, and 60 plus conference abstracts. I have also published three IONM books, *Surgical Neurophysiology; A Reference Guide to IONM*, 1st, 2nd Edition (2,012), *Mapping of the Brain* (2021) and *Introduction to Neurophysiology* (2023).

EDUCATION

Dec 2020	<i>Mini-Fellowship in Movement Disorders</i> College of Medicine, Dept. of Neurological Sciences The University of Nebraska Medical Center	Nebraska, NE
Jan 2020	<i>Transcranial Doppler Workshop</i> Axis Neuromonitoring Annual Workshop and Meeting	Richardson, TX
Apr 2019	<i>Transcranial Doppler Workshop</i> Atlantic Health Overlook NeuroConference 2019	Summit, NJ
Apr 2018	<i>AANS 2018 Annual Scientific Meeting,</i> 2 nd International Brain Mapping Course	New Orleans, LA
May 2015	<i>Inomed</i> User Meeting: Multimodal Intraoperative Neuromonitoring	Emmendingen, Germany
Mar 2015	"EBM Statistics from Basic to Meta-Analysis" Workshop National & Gulf Center for Evidence-Based Health Practice, Deanship of Postgraduate Education, King Saud Bin Abdulaziz University for Health Sciences,	Riyadh, KSA
Oct 2014	<i>Inomed</i> Scientific Workshop: Functional Neurosurgery, Pain Treatment, Neurodiagnostics, IONM	Istanbul, Turkey
Nov 2013	"Qualitative Research: Design and Analysis" Workshop College of Medicine, King Saud Bin Abdulaziz University for Health Sciences,	Riyadh, KSA
Aug 2012	Re-Certification American Board of Neurophysiological Monitoring (D.ABNM)ABNM, USA	
Mar 2012	<i>Inomed</i> Certificate of Advance Training-Multimodal Intraoperative Neuromonitoring	Emmendingen, Germany
Dec 2010	<i>Re-Certification in Neurophysiologic Intraoperative Monitoring (CNIM)</i>	ABRET, USA
Fall 2009	<i>University of Virginia</i> Introduction to Public Administration	Charlottesville, VA, USA
Fall 2006	<i>University of Maryland University Campus</i> Public Health Administration	College Park, MD, USA
Jan 2003	<i>American Board of Neurophysiological Monitoring</i> D.ABNM	ABNM, USA
Oct 2000	<i>Certification in Neurophysiologic Intraoperative Monitoring</i> CNIM	ABRET, USA
1996 - 98	<i>Case Western Reserve University</i> Postgraduate coursework in Biomedical Engineering	Cleveland, OH, USA

- Nov 1991 *Wahaaj Institute of Ultrasound Imaging* *Peshawar, Pakistan*
Affiliate: Thomas Jefferson University Hospital, Philadelphia, PA, USA
 Diploma in basic training in Ultrasound
- Nov 1991 *Khyber Medical College, University of Peshawar* *Peshawar, Pakistan*
 MBBS (MD) - Bachelor of Medicine & Bachelor of Surgery

QUALIFICATIONS

- 2020 *Mini-Fellowship in Movement Disorders* *Nebraska, NE*
 College of Medicine, Dept. of Neurological Sciences
 University of Nebraska Medical Center
- 2019 FASET *ASET- American Neurodiagnostic Society, Kansas City, MO*
 Fellowship, ASET- American Neurodiagnostic Society
- 2013 FASNM *American Society of Neurophysiological Monitoring, Chicago, IL*
 Fellowship, American Society of Neurophysiological Monitoring
- 2013 P.I. *National Guard Health Affairs, King Abdulaziz Medical City, Riyadh, KSA*
 Principle Investigator Registration
- 2012 ICH-GCP Course *National Guard Health Affairs, King Saud Bin Abdulaziz University*
For Health Sciences, King Abdullah International Medical Research Center, Riyadh, KSA
 Certification of International Conference on Harmonization's
 Good Clinical Practice for Conducting Research The
- 2012 D.ABNM (#60) *American Board of Neurophysiologic Monitoring*
 Re-Certification, Diplomate American Board of Neurophysiological Monitoring
- 2012 Consultant *Saudi Commission for Health Specialties, KSA*
 Professional Registration as a Consultant (Neurophysiologic Monitoring) with Saudi Commission
- 2010 CNIM (#362) *American Board of Registration of Electroencephalographic*
& Evoked Potential Technologists
 Re-certification in Neurophysiological Monitoring
- 2003 D.ABNM (#60) *American Board of Neurophysiologic Monitoring*
 Diplomate American Board of Neurophysiological Monitoring
- 2000 CNIM (#362) *American Board of Registration of Electroencephalographic*
& Evoked Potential Technologists
 Certificate in Neurophysiological Monitoring
- 1992 Licensed Practitioner *Pakistan Medical & Dental Council, Islamabad, Pakistan*
 Qualified to practice Medicine & Surgery in Pakistan
- 1991 MD (MBBS) *Khyber Medical College, University of Peshawar, Pakistan*

EMPLOYMENT RECORD

12/11-Present: Global Innervation LLC *Dallas, TX USA*
President & CEO

Independent Consulting Services:

12/22-Current *Richardson, TX, USA*
Remote - Axis Neuromonitoring LLC

02/17- 12/17 *White Plains, NY, USA*
Director of Medical Services,
IONM Training & Education Consulting – Neuroalert LLC

08/16-08/16 *White Plains, NY, USA*
CNIM Training Workshop – Neuroalert LLC

06/15-08/15 *Roanoke, VA, USA*
Associate - SpecialtyCare

07/14-08/14 *Charlotte, NC, USA*
Contractor – STIM, Inc.

07/13-08/13 *New York City, NY, USA*
Training and Education Specialist – Safe Passage Neuromonitoring, LLC

09/21-Present College of Health Sciences, Rush University *Chicago, IL, USA*
Adjunct Instructor, Dept. of Health Sciences

08/19-Present The University of Texas at Dallas *Richardson, TX, USA*
Lecturer, Dept. of Neuroscience
School of Behavioral and Brain Sciences

05/16-Present Labouré College of Healthcare *Milton, MA, USA*
Adjunct Professor
Intraoperative Neuromonitoring (IONM) Certificate Program

01/18-11/21 Axis Neuromonitoring LLC *Richardson, TX, USA*
Vice President of Clinical Affairs

05/17-12/17 Hamad Medical Corporation (HMC) *Doha, Qatar*
Senior Consultant,
Dept. of Neurosurgery, Neuroscience Institute

09/11-01/17 *King Abdulaziz Medical City* *Riyadh, KSA*
Ministry of National Guard Health Affairs
Consultant Clinical Neurophysiology,
Division of Neurology, Department of Medicine

01/04-09/11	<i>Impulse Monitoring Inc.</i> 04/09 – 09/11 Senior Clinical Neurophysiologist and Research Coordinator, University of Virginia Medical Center (UVMC) 10/07 - 03/09: Supervisor Neurophysiologist University of Virginia Medical Center (UVMC)	Charlottesville, VA, USA Charlottesville, VA, USA
	5/07 - 9/07: Regional Manager, Washington DC & Maryland Senior Clinical Neurophysiologist & Trainer Hiring In-charge, Entry and Advanced Level Technologists	Columbia, MD, USA
	6/05 - 5/07: Regional Manager, Maryland & New Jersey Senior Clinical Neurophysiologist & Trainer Hiring In-charge, Entry and Advanced Level Technologists	Columbia, MD, USA
	9/04 - 5/05: West Coast Regional Manager Senior Clinical Neurophysiologist & Trainer	Seattle, WA, USA
	1/04 - 8/04: Senior Clinical Neurophysiologist & Trainer	Columbia, MD, USA
5/02-1/04	<i>Sentient Medical Systems</i> Member, Corporate Executive Board, Director, Pennsylvania & New Jersey LLCs	Philadelphia, PA, USA
5/99-5/02	<i>Biotronic NeuroNetwork.</i> Senior Neurophysiologist	Ann Arbor, MI, USA
1995-98	<i>Case Western Reserve University,</i> 1997 – 98: IT Consultant, WHO Collaboration Center, <i>F.P.B. School of Nursing</i> 1995 – 98: Research Assistant, Department of Biomedical Engineering, <i>School of Engineering</i> 1996-97: Course Instructor, Department of Anatomy, <i>Schools of Dentistry & Medicine</i>	Cleveland, OH, USA
1995-96	<i>Cleveland Clinic Foundation</i> Cell Matrix Laboratory Research Associate, Department of Biomedical Engineering	Cleveland, OH, USA
1992-93	<i>Samaritan Hospital</i> Extern, Department of Radiology	Troy, NY, USA
5/92-8/92	<i>Hayat Shaheed Teaching Hospital, University of Peshawar</i> Resident, Department of Surgery	Peshawar, Pakistan
12/91-5/92	<i>Hayat Shaheed Teaching Hospital, University of Peshawar</i> Resident, Department of Radiology	Peshawar, Pakistan

INTRAOPERATIVE MONITORING (IONM) EXPERIENCE

[Last updated: Feb 1st, 2023]

1999 - 2023

<u>Neuro Surgeries monitored</u>	<u>Cases</u>
Acoustic neuroma	390
Vestibular neurectomy	10
Other CPA lesion	255
Brainstem lesion	110
Skull base lesion	185
Intracranial aneurysm	229
Cortical lesions/Tumors	1700
Language Mapping	715
Chiari malformation	55
Spinal cord lesion	205
Tethered cord	1211
Cauda equina lesion	205
Brachial plexus	75
Rhizotomy	189
Peripheral nerve	105
Spinal stimulator implants	212
Cortical stimulator implants	32
Epilepsy surgeries	130
Genitorfemoral Neurectomy	001

<u>Orthopedic Surgeries monitored</u>	<u>Cases</u>
ACDF	524
PCF	220
ALIF	50
PLIF	596
DLIF /XLIF	92
Scoliosis	2780
Total Hip replacement	041
Hip arthroscopy	22
Knee	02
Periacetabular osteotomy	12
Tibial/Fibular osteotomy	20
Sacro Iliac Joint Screws	61

<u>ENT Surgeries monitored</u>	<u>Cases</u>
Thyroidectomy	487
Parotidectomy	085
Tympanoplasty	062
Radical neck dissection	06
Cochlear Implants	02
Mastoid Tumor	02

<u>Vascular Surgeries monitored</u>	<u>Cases</u>
Carotid Endarterectomy	245
Thoraco-abdominal aneurysm	08
CABG	04
External Carotid-Internal Carotid bypasses	006

<u>Interventional Neuro Radiological (INR) procedures monitored</u>	<u>Cases</u>
Intracranial aneurysm coils	240
Intracranial AVM	034
Spinal AVM	049
Carotid Stents	058
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<u>Clinical Procedures</u>	<u>Cases</u>
WADA	028
Burst Suppression	200
Long term EEG	3245
Clinical EPs	2150
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<u>Urological Procedures</u>	<u>Cases</u>
Psoas Mass Resection	001
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Total	14000+

TEACHING

Areas of expertise

Intra Operative Neurophysiological Monitoring (IONM), electroencephalography (EEG), ICU monitoring, brain death studies, clinical evoked potentials, research, onsite/real-time training, Electrocorticography, epilepsy monitoring units (EMU), language mapping, cortical and functional mapping, transcranial Doppler (TCD).

CNIM (Certification in Intraoperative Neurophysiological Monitoring) exam preparation courses.

D.ABNM (Diplomate American Board of Neurophysiological Monitoring) exam preparation courses.

Postdoctoral Fellowship in Surgical Neurophysiology

(Online Six months training program)

- Group #1: Jun-Dec 2020
- Group #2: Jan-Jul 2021
- Group #3: Jun-Dec 2021
- Group #4: Jan-Jul 2022
- Group #5: Jun-Dec 2022
- Group #6: Jan-Jul 2023

Diploma in Surgical Neurophysiology

(Online Six months training program)

- Group #1: Jun-Dec 2020
- Group #2: Jan-Jul 2021
- Group #3: Jun-Dec 2021

- Group #4: Jan-Jul 2022
- Group #5: Jun-Dec 2022
- Group #6: Jan-Jul 2023

Industry Internship Program: Supervisor & Research Advisor

The University of Texas at Dallas Interns:

- 1) Chen Wang (Aug-Dec'18)
 - Kathryn Overzet, Chen Wang, Faisal Riaz Jahangiri. "The incidence of Positioning-Related Intraoperative Neurophysiological Monitoring (IONM) Changes A Review of 5894 Surgeries". *EC Neurology* 11.1 (2019): 46-54
- 2) Courtney Trausch (Aug' 18-May'19)
 - Faisal R. Jahangiri, Justin W. Silverstein, Courtney Trausch, Sami Al Eissa, Zachariah M. George, Hargovind DeWal & Izabela Tarasiewicz (2019) Motor Evoked Potential Recordings from the Urethral Sphincter Muscles (USMEPs) during Spine Surgeries, *The Neurodiagnostic Journal*, 59:1, 34-44, DOI: 10.1080/21646821.2019.1572375
 - Faisal R Jahangiri, Courtney Trausch. "Utilizing Longer Intramuscular Needle Pair Electrodes: What are we Missing in Our Intraoperative Muscle Recordings?". *EC Neurology* 11.4 (2019): 288-294.
- 3) Derrick Mora (Jan-May'19)

Kathryn Overzet, Derrick Mora, Eloise Faust, Lindsay Krisko, Dyanne Welch & Faisal R. Jahangiri (2021) Distal Stimulation Site at the Medial Tibia for Saphenous Nerve Somatosensory Evoked Potentials (DSn-SSEPs) in Lateral Lumbar Spine Procedures, *The Neurodiagnostic Journal*, 61:2, 72-85, DOI: 10.1080/21646821.2021.1903277
- 4) Jerril Jacob (Jan-Dec'19)
- 5) Rabehah Asdi (Jan' 19-May'21)
 - Jahangiri FR, Asdi RA, Tarasiewicz I, et al. (June 10, 2019) Intraoperative Triggered Electromyography Recordings from the External Urethral Sphincter Muscles During Spine Surgeries. *Cureus* 11(6): e4867. doi:10.7759/cureus.4867.
 - Jahangiri FR, Ilyas S, Asdi R, Escobedo E, Seals E. Protecting the Visual Pathways During Optic Nerve Surgery Using Intraoperative Visual Evoked Potentials (VEP)". *Acta Scientific Clinical Case Reports* 1.2 (2020): 01-06.
 - Jahangiri F R, Azam A, Asdi R A, Ahmad I, Basha S I. (Sep. 2020) Intraoperative Neurophysiological Monitoring During Trigeminal Schwannoma Surgery. *Cureus (in Print)*: e. doi:10.7759/cureus.
- 6) Jacqueline Perez (May-Dec'19)
- 7) Reagan Knightstep (Jan-May'20)
- 8) Elizabeth Ekvall (Jan-May'21)
 - Faisal R Jahangiri, Katharine Pautler, Elizabeth Ekvall, Meredith Tucker, Angela Goodlin and Afia Islam. "Intraoperative Neurophysiological Monitoring for Brainstem Tumor Surgeries". *EC Neurology* 12.11 (2020): 80-87.
- 9) Gabrielle Bennett (Jan-Dec'20)
 - Jahangiri F R, Pautler K, Watters K, et al. (March 19, 2020) Mapping of the Somatosensory Cortex. *Cureus* 12(3): e7332. doi:10.7759/cureus.7332
- 10) Fauziya Fareed (Jan-Aug'20)
- 11) Katharine Pautler (Mar-Dec'20)
 - Jahangiri F R, Pautler K, Watters K, et al. (March 19, 2020) Mapping of the Somatosensory Cortex. *Cureus* 12(3): e7332. doi:10.7759/cureus.7332
 - Faisal R Jahangiri, Katharine Pautler, Elizabeth Ekvall, Meredith Tucker, Angela Goodlin and Afia Islam. "Intraoperative Neurophysiological Monitoring for Brainstem Tumor Surgeries". *EC Neurology* 12.11 (2020): 80-87.
- 12) Angela Goodlin (Jun '20-May'21)

- *Faisal R Jahangiri, Katharine Pautler, Elizabeth Ekvall, Meredith Tucker, Angela Goodlin and Afia Islam. "Intraoperative Neurophysiological Monitoring for Brainstem Tumor Surgeries". EC Neurology 12.11 (2020): 80-87.*
- 13) Hiral Gorasia (Aug '20-May'21)
 - 14) Sarah Sharifi (Oct'20-May'21)
 - *Jahangiri FR, Huckabey M, Baloney N, Sharifi S, Liang M, Porwal C (2021) IONM Uses During Carotid Surgeries.*
 - 15) Tal Allouche (Jan-Aug'21)
 - 16) Nicholas A. Bathurst (Jan-May'21)
 - 17) John Moorman (Jan' 21- Current)
 - *Jahangiri FR, Dobariya A, Kruse A, Kalyta O, Moorman JD (September 25, 2020) Mapping of the Motor Cortex. Cureus 12(9): e10645. doi:10.7759/cureus.10645.*
 - 18) Melanie Piedra (Mar'21-Current)
 - 19) Naomi Baloney (Jun'21-Current)
 - *Jahangiri FR, Huckabey M, Baloney N, Sharifi S, Liang M, Porwal C (2021) IONM Uses During Carotid Surgeries.*
 - 20) Seniha Yildirim (Aug'21-Current)
 - *Jahangiri FR, Blake I, Lopez J, Puryear H, Williams K, Yildirim S (2021) Utility of IONM in Thyroid Surgeries.*
 - *Jahangiri FR, Appel E, Ezeji A, Yildirim (2021) Sensory Mapping of the Brain: Median vs Tibial Nerve.*
 - 21) Misty Huckabey (Sep'21-Current)
 - *Jahangiri FR, Huckabey M, Baloney N, Sharifi S, Liang M, Porwal C (2021) IONM Uses During Carotid Surgeries.*
 - *Jahangiri FR, Huckabey M, Blaylock J, Smith, HK (May 2022) Left Parietal Brain Metastasis Proximate to Motor Strip: Integration of Intraoperative Neurophysiological Monitoring (IONM) and Navigated Transcranial Magnetic Stimulation (nTMS) Data. ASNM Annual Meeting.*
 - 22) Shruthi Ravikumar (Sep'21-Current)
 - 23) Franz Mallalieu (Sep'21-Current)
 - 24) Nwasinachi Ezeji (Sep'21-Current)
 - 25) Shabab Sami Kabir (Jan '22-Current)
 - *Jahangiri FR, Liang M, Kabir S, Khowash O (2021) Motor Mapping of the Brain: Taniguchi vs Penfield.*
 - 26) Marie Liang (Jan '22-Current)
 - *Jahangiri FR, Huckabey M, Baloney N, Sharifi S, Liang M, Porwal C (2021) IONM Uses During Carotid Surgeries.*
 - *Jahangiri FR, Liang M, Kabir S, Khowash O (2021) Motor Mapping of the Brain: Taniguchi vs Penfield.*
 - 27) Anwara Khan (Jan-Dec '22)
 - 28) Tuba Shiwani (Jun'22-Current)
 - 29) Yasaman Hooshmandi (Jun'22-Current)
 - 30) Cesia Alvarez (Aug'22-Current)
 - 31) Angel Voon (Jan'23-Current)
 - 32) Swati Chakarvarty (Jan'23-Current)
 - 33) Joanna Day (Jan '23-Current)
 - 34) Mathew Solomon (Jan'23-Current)
 - 35) Danny Gruber (Jan'23-Current)

The University of Texas at Dallas Research Assistant:

- 1) Xinyi Qin (Aug' 20-May'21)
 - *Jahangiri FR, Williams K, Qin X (2021) EEG vs ECoG*

Post-Doctoral Interns:

- 1) Sidra Ilyas, MD (Jan'19-May'20)
 - *Jahangiri FR, Ilyas S, Asdi R, Escobedo E, Seals E. Protecting the Visual Pathways During Optic Nerve Surgery Using Intraoperative Visual Evoked Potentials (VEP)". Acta Scientific Clinical Case Reports 1.2 (2020): 01-06.*
- 2) Nida Qadir, MD (May'19-May'20)
 - *Faisal R. Jahangiri, Nida Qadir, James Blaylock, Leah Cronic-Solano & Jason Ramsey (2019) Waveform Window #46: Radial Nerve SSEP (Rn-SSEP): Is It Reliable?, The Neurodiagnostic Journal, DOI: 10.1080/21646821.2019.1680085.*
 - *Jahangiri FR, Blaylock J, Qadir N, Ramsey JA. Multimodality Intraoperative Neurophysiological Monitoring (IONM) During Shoulder Surgeries. Neurodiagn J. 2020 Apr 16:1-17. doi: 10.1080/21646821.2020.1743952.*
- 3) Abeera Azam, MD (Jan' 20-Jan'21)
 - *Jahangiri F R, Azam A, Asdi R A, Ahmad I, Basha S I. (Sep. 2020) Intraoperative Neurophysiological Monitoring During Trigeminal Schwannoma Surgery. Cureus (in Print): e. doi:10.7759/cureus.*
- 4) Hira Pervez, MD (May'20-Mar'21)
- 5) Asiya Qureshi, MD (Sep'21-Jan'22)
- 6) Muhammad Umair, MD (Jan'22-Current)
- 7) Roshan Asghar, MD (Jan'22-Current)
- 8) Muhammad Mushhood-ur-Reham (Jan'22-Current)
- 9) Neha Kamran (Jun'22-Current)
- 10) Muhammad Asad Sultan (Jul'22-Current)
- 11) Rida Farhan (Oct'22-Current)
- 12) Syed Muhammad Owais (Feb'23-Current)

Courses Taught Nationally & Internationally:

Spring 2023	IONM Special Topics: Mapping of the Brain Special Topics in Applied Cognition & Neuroscience School of Behavioral and Brain Sciences, The University of Texas at Dallas	<i>Richardson, TX, USA</i>
Spring 2023	IONM Part II School of Behavioral and Brain Sciences, The University of Texas at Dallas	<i>Richardson, TX, USA</i>
Spring 2023	Human Neurophysiology Lab School of Behavioral and Brain Sciences, The University of Texas at Dallas	<i>Richardson, TX, USA</i>
Spring 2023	Neurobiology of Emotions School of Behavioral and Brain Sciences, The University of Texas at Dallas	<i>Richardson, TX, USA</i>
Jan 2023	Intraoperative Neuromonitoring in Spine Surgery Department of Spine Surgery, Khyber Teaching Hospital	Peshawar, Pakistan
Jan 2023	Live Neuromonitoring Workshop in Spine Surgery Department of Spine Surgery, Hayatabad Medical Complex	Peshawar, Pakistan
Fall 2022	IONM Special Topics: Mapping of the Spinal Cord Special Topics in Applied Cognition & Neuroscience	<i>Richardson, TX, USA</i>

School of Behavioral and Brain Sciences, The University of Texas at Dallas

- Fall 2022 Seminar in Neuroscience: Fundamentals of EEG & ECoG *Richardson, TX, USA*
Special Topics in Applied Cognition & Neuroscience (Graduate Course)
School of Behavioral and Brain Sciences, The University of Texas at Dallas
- Fall 2022 Seminar in Neuroscience: Fundamentals of EEG & ECoG *Richardson, TX, USA*
Special Topics in Applied Cognition & Neuroscience (Undergraduate Course)
School of Behavioral and Brain Sciences, The University of Texas at Dallas
- Fall 2022 Neurobiology of Emotions *Richardson, TX, USA*
School of Behavioral and Brain Sciences, The University of Texas at Dallas
- Spring 2022 IONM Part II *Richardson, TX, USA*
School of Behavioral and Brain Sciences, The University of Texas at Dallas
- Fall 2021 Advance IONM – Mapping of the Brain *Richardson, TX, USA*
Special Topics in Applied Cognition & Neuroscience
School of Behavioral and Brain Sciences, The University of Texas at Dallas
- May 2021 Conference Chair, 30th Annual Meeting *Virtual, USA*
American Society of Neurophysiological Monitoring (ASNM) 2021
- Mar 2021 IONM Pre-Conference Workshop - Course Director *Virtual, KSA*
Saudi Association of Neurological Surgery (SANS)
Intraoperative Neurophysiological Monitoring (IONM) for Neurosurgeries
- Spring 2021 IONM Part II *Richardson, TX, USA*
School of Behavioral and Brain Sciences, The University of Texas at Dallas
- Jan 2021 Course Director *Richardson, TX, USA*
Axis Annual IONM Workshop and Symposium
- Nov 2020 IONM Pre-Conference Workshop - Course Director / Chair *Virtual, KSA*
Saudi Spine Society 3rd Annual Meeting
Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons
- Fall 2020 Advance IONM – Mapping of the Spinal Cord *Richardson, TX, USA*
Special Topics in Applied Cognition & Neuroscience
School of Behavioral and Brain Sciences, The University of Texas at Dallas
- Spring 2020 IONM Part II *Richardson, TX, USA*
School of Behavioral and Brain Sciences, The University of Texas at Dallas
- Jan 2020 Course Director *Richardson, TX, USA*
Axis Annual IONM Workshop and Seminar
- Fall 2019 Advance IONM – Mapping of the Brain *Richardson, TX, USA*
Special Topics in Applied Cognition & Neuroscience
School of Behavioral and Brain Sciences, The University of Texas at Dallas

Sep 2019	Conference Chair American Society of Neurophysiological Monitoring (ASNM) 2019 Fall Symposium	<i>Boston, MA, USA</i>
Jan 2019	Course Director Axis Annual IONM Workshop and Seminar	<i>Richardson, TX, USA</i>
2003-2019	D. ABNM Training Mentoring and training of senior neurophysiologists for Diplomate examination	<i>USA</i>
2000-2019	CNIM Training Mentoring and training of senior neurophysiologists for IONM Certification	<i>KSA /USA</i>
Nov 2018	IONM Pre-Conference Workshop - Course Director / Chair Saudi Spine Society 2 nd Annual Meeting Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons	<i>Jeddah, KSA</i>
Feb 2018	Conference Chair American Society of Neurophysiological Monitoring (ASNM) 2018 Annual Meeting	<i>Orlando, FL, USA</i>
Dec 2017	IONM Pre-Conference Workshop - Course Director / Chair Saudi Spine Society 1 st Annual Meeting Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons	<i>Riyadh, KSA</i>
2017	ASET Continuing Education: 45 ACE Credits Course Neuro Alert Monitoring: CNIM Prep course	<i>White Plains, NY, USA</i>
Dec 2017	IONM Pre-Conference Workshop - Course Director / Chair Saudi Spine Society 1 st Annual Meeting Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons	<i>Riyadh, KSA</i>
Mar 2017	IONM Spine Workshop - Course Director / Chair Saudi Association of Neurological Surgery (SANS) Intraoperative Neurophysiological Monitoring (IONM) for Neurosurgeries	<i>Riyadh, KSA</i>
Mar 2016	POA Spine Forum: Second International IONM Workshop Basic Intraoperative Neurophysiological Monitoring (IONM) Hands-on Workshop for Spine Surgeons	<i>Rawalpindi, Pakistan</i>
Feb-Mar 2016	IONM Workshop Course Director / Chair Intraoperative Neurophysiological Monitoring (IONM) for Neurosurgeries 10 th Saudi Association of Neurological Surgery (SANS) Annual Meeting	<i>Riyadh, KSA</i>
Nov 2015	IONM Workshop Neurophysiological Monitoring in Spine Surgeries 9 th APCSS and 1 st ASA Conjoint Meeting Asia Pacific Cervical Spine Society (APCSS) & 1 st Arab Spine Academy (ASA) Meeting	<i>Dubai, UAE</i>

Oct 2015	IONM Course Director 2015 Annual Meeting Intraoperative Neurophysiological Monitoring (IONM) Course, Co-Sponsored by: Southern Society of Neurophysiological Monitoring (SSET) & Texas Neurodiag Society	<i>Dallas, TX, USA</i>
2014-16	Neurology, School of Medicine King Saud Bin Abdulaziz University for Health Sciences & Postgraduate Training Center	<i>Riyadh, KSA</i>
Mar 2015	POA Spine Forum: First International IONM Workshop Basic Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons	<i>Rawalpindi, Pakistan</i>
Mar 2015	IONM Workshop Course Director / Chair Intraoperative Neurophysiological Monitoring & Navigation for Neurosurgeries 9 th Saudi Association of Neurological Surgery (SANS) Annual Meeting	<i>Dammam, KSA</i>
Dec 2014	IONM Workshop Course Director / Chair Spine Update 2014: Toward Standardized Spine Surgery Practice Basics of IONM for Spine Surgeons	<i>Riyadh, KSA</i>
Nov 2014	Clinical Neurophysiology Workshop 4 th Annual Saudi Epilepsy Society Conference 1 st Saudi International Stereotactic & Functional Neurosurgery Conference	<i>Riyadh, KSA</i>
May 2014	Traumatic Brain Injury (TBI) Workshop EEG / TCD/ Neurophysiological Monitoring for TBI King Abdulaziz Medical City, National Guard Health Affairs King Saud Bin Abdulaziz University for Health Sciences & Postgraduate Training Center	<i>Riyadh, KSA</i>
Nov 2013	IONM Workshop Neurophysiological Monitoring during Vascular Surgeries 21 st Saudi Neurology Society Annual Meeting	<i>Riyadh, KSA</i>
Sept 2013	IONM Course Director / Organizer 53 rd Annual Meeting, Southern Society of Neurophysiological Monitoring (SSET) Intraoperative Neurophysiological Monitoring (IONM) Course	<i>Savannah, GA, USA</i>
Sept 2012	IONM Course Director 52 nd Annual Meeting, Southern Society of Neurophysiological Monitoring (SSET) Intraoperative Neurophysiological Monitoring (IONM) Course	<i>Orlando, FL, USA</i>
Sept 2012	CNIM Exam Preparation Workshop 52 nd Annual Meeting, Southern Society of Neurophysiological Monitoring (SSET) Intraoperative Neurophysiological Monitoring Course	<i>Orlando, FL, USA</i>
Feb 2012	Neurosciences Critical Care” Course & Workshop Neurophysiological Monitoring of the CNS King Abdulaziz Medical City, National Guard Health Affairs King Saud Bin Abdulaziz University for Health Sciences & Postgraduate Training Center	<i>Riyadh, KSA</i>

Oct 2011	Traumatic Brain Injury (TBI) EEG / Neurophysiological Monitoring for TBI King Abdulaziz Medical City, National Guard Health Affairs King Saud Bin Abdulaziz University for Health Sciences & the Postgraduate Training Center	Riyadh, KSA
Oct 2011	Neurosciences Critical Care” Course & Workshop Neurophysiological Monitoring of the CNS King Abdulaziz Medical City, National Guard Health Affairs King Saud Bin Abdulaziz University for Health Sciences & Postgraduate Training Center	Riyadh, KSA
1999-17	IONM & EEG: Basics & Advance Training Trained 350+ Neurophysiology technologists	KSA /USA
2009-10	ASET Continuing Education: 38.5 ACE Credits Course <i>IONM in High-Risk Spine & Brain Surgeries: Monthly Lecture Series</i>	USA
2003-05	Master Thesis Supervision at <i>Wayne State University</i> External supervisor, <i>“Efficacy of intraoperative neurophysiological monitoring in detecting and preventing injury during high-risk brain aneurysm surgeries.”</i>	Detroit, MI, USA
2002-04	ASET Continuing Education: 28 ACE Credits Course <i>TCeMEP: Trans Cranial Motor Evoked Potentials. Weekly Lecture Series</i> Seven courses: Trained 30+ neurophysiologists in various states across the US.	USA
1996-97	Gross Anatomy Graduate and Postgraduate Medical & Dental Students	Case Western Reserve University, Cleveland, OH, USA
1995-96	Human Biology Undergraduate Students	Cleveland State University, Cleveland, OH, USA
1991-92	Medicine & Surgery Medical students	Hayat Shaheed Teaching Hospital, Peshawar, Pakistan

Grand Rounds for Physicians & Surgeons:

Jan 2023	Live Neuromonitoring Workshop in Spine Surgery Department of Spine Surgery, Hayatabad Medical Complex	Peshawar, Pakistan
Jan 2021	Introducing IONM in KPK for Spine, Brain, and ENT Surgeons Hosted by KMCAANA and Global Innervation LLC, USA	Live Workshop, USA
Apr 2019	Recent Advances in Intraoperative Neurophysiological Monitoring for Neurosurgery <i>King Fahad University Hospital, Dammam, KSA</i>	
Nov 2018	Intraoperative Neurophysiological Monitoring (IONM): A New Modality for Surgeries Shifa International Hospital, Islamabad, Pakistan	

- Mar 2018 Recent Advances in Neuroscience: Surgical Neurophysiology for Improvement in Post-Operative Patient's Outcome. Live Video Presentation,
APPNA Neurology MERIT, Dallas, TX/Pakistan
- Feb 2018 Intraoperative Neurophysiological Monitoring (IONM) in Neurosurgical Procedures
Dept. of Neurosurgery, University of Texas Health Science Center San Antonio, TX, USA
- Oct 2017 IONM for Neurosurgeries Doha, Qatar
Dept. of Neurosurgery, Hamad Medical Corporation
- Apr 2015 Introduction to Intraoperative Neurophysiological Monitoring Doha, Qatar
Dept. of Neurosciences, Hamad Medical Corporation
- Dec 2013 Introduction to Intraoperative Neurophysiological Monitoring Riyadh, KSA
Neurology Residents of Riyadh, Dept. of Medicine, NGHHA
- Dec 2013 Neurophysiological Monitoring during High Risk Vascular Surgeries
Live Video Presentation, APPNA Neurology MERIT, Riyadh, KSA/Pakistan
- Feb 2013 Cranial Nerve Monitoring: Preventing Facial Nerve Injuries & Hearing Preservation during high-risk brain surgeries. Live Video Presentation,
APPNA Neurology MERIT, Riyadh, KSA/Pakistan
- Nov 2012 Intraoperative Neurophysiological Monitoring: Effect of Anesthesia
NGHHA, Dept. of Anesthesia, Riyadh, KSA
- Sept 2012 Surgical Neurophysiology: A Luxury or Necessity? Riyadh, KSA/Pakistan
Live Video Presentation, APPNA Neurology MERIT
- July 2012 Introduction to Intraoperative Neurophysiological Monitoring Jeddah, KSA
King Abdulaziz Medical City, NGHHA, Dept. of Surgery
- Feb 2012 Introduction to Intraoperative Neurophysiological Monitoring Riyadh, KSA
King Abdulaziz Medical City, NGHHA, Dept. of Medicine
- April 2011 Surgical Neurophysiology: Selective Dorsal Root Rhizotomy (SDR) for the treatment of Spasticity. Live Video Presentation.
APPNA Neurology MERIT Charlottesville, VA/Pakistan
- Oct 2010 Anesthesia & Surgical Neurophysiology: Effect of Anesthesia on Intra Operative Neurophysiological Monitoring. Live Video Presentation.
APPNA Neurology MERIT, Charlottesville, VA/Pakistan
- Aug 2010 Surgical Neurophysiology: An Introduction to Intra Operative Neurophysiological Monitoring. Live Video Presentation.
APPNA Neurology MERIT, Pakistan
- Oct 2008 IONM in Brain Surgeries UVA Neurosurgery, Charlottesville, VA, USA
- Oct 2008 IONM in Spine Surgeries UVA Neurosurgery, Charlottesville, VA, USA

July 2008	IONM and Spine Surgeries	UVA Ortho/Neuro Spine, Charlottesville, VA, USA
May 2007	Physiological effects on Evoked Potentials	WHC, Washington, D.C, USA
Mar 2005	Advances in IONM	Seattle, WA, USA
Dec 2004	IONM in high-risk surgical procedures	KMC, Peshawar, Pakistan
Nov 2004	Anesthesia and IONM	Seattle, WA, USA
Sep 2003	IONM in Interventional Neurosurgical procedures	TJUH, Philadelphia, PA, USA

In-services

Feb 2013	IONM: Introduction to the OR (Neurophysiology Lab Team)	NGHA, Riyadh, KSA
Mar 2012	IONM: Cranial Nerves (Neurophysiology Lab Team)	NGHA, Riyadh, KSA
Feb 2012	Introduction to IONM (Neurophysiology Lab Team)	NGHA, Riyadh, KSA
May 2009	IONM in Neurosurgery (Nursing Staff Team)	UVA, Charlottesville, VA, USA
Feb 2009	IONM in INR Procedures (INR Team)	UVA, Charlottesville, VA, USA
Jan 2009	IONM in Spine Surgeries (Spine Nursing Team)	UVA, Charlottesville, VA, USA
Oct 2004	IONM in High-Risk Surgeries	VMC, Seattle, WA, USA

Books Published:

1. Surgical Neurophysiology: First Edition

“A Reference Guide to Intraoperative Neurophysiological Monitoring (IONM)”
Amazon Printing Press: November 2011; page count: 328, ISBN: 1466297131.



2. Surgical Neurophysiology: Second Edition

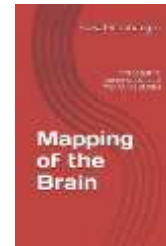
“A Reference Guide to Intraoperative Neurophysiological Monitoring (IONM)”
Amazon Printing Press: April 2012; page count: 410, ISBN147516498X.



3. Mapping of the Brain.

“Intraoperative Neurophysiological Monitoring (IONM)”

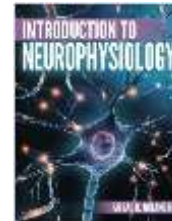
Global Innervation LLC, USA. Amazon Printing Press: Mar 2021, page count: 78, ISBN 979-8700754903.



4. Introduction to Neurophysiology.

Kendall Hunt. 2023

ISBN 9798765742976 (print), ISBN 9798765742969 (ebook)



Chapters Published:

1. Jahangiri, Faisal R. “Neurophysiological Monitoring of the Cervical Spine.” Chapter. In *Textbook of the Cervical Spine*, edited by Francis H Shen, Dino Samartzis, and Richard G Fessler, 105–14. Philadelphia, PA: Elsevier Press, 2014.
2. Jahangiri, Faisal R, Aksharkumar Dobariya, Aaron Kruse, Olga Kalyta, and John D. Moorman. “Mapping of the Motor Cortex.” Chapter. In *Prime Archives in Medicine*. 2nd Edition, edited by Shola Elijah Adeniji. Hyderabad, India: Vide Leaf. 2021.
3. Jahangiri, Faisal R, Gabrielle L Bennett, Sahar S Anjum, Keri Watters, and Katharine Pautler. “Mapping of the Sensory Cortex.” Essay. In *Mapping of the Brain: Intraoperative Neurophysiological Monitoring (IONM)*, 1–16. Dallas, TX: Independently published, 2021.
4. Jahangiri, Faisal R, Aksharkumar Dobariya, Aaron Kruse, Olga Kalyta, and John D. Moorman. “Mapping of the Motor Cortex.” Essay. In *Mapping of the Brain: Intraoperative Neurophysiological Monitoring (IONM)*, 17–40. Dallas, TX: Independently published, 2021.
5. **Jahangiri, Faisal R**, Gurtegh S. Chima, Martha Pearson, Jacob Jackson and Arshad A. Siddiqui. “Mapping of the Language Cortex.” Essay. In *Mapping of the Brain: Intraoperative Neurophysiological Monitoring (IONM)*, 41–68. Dallas, TX: Independently published, 2021.
6. Chapter: Basics of EEG. Shehzeen Fatima Memon, **Faisal R. Jahangiri**. Dow University of Health Sciences, Karachi, Pakistan, Global Innervation LLC, Dallas, Texas, USA. *Neurology Pocketbook, Essential Neurology*. AlNeuroCare PLLC, USA. Jan 18, 2022.
7. **Jahangiri, Faisal R**. “Basic Electronics for Neurophysiology.” Chapter. In *Introduction to Neurophysiology*, 93–112. Dubuque, IA: Kendall Hunt Publishing, 2023.
8. Reagan Knightship, Keri Watters, Kara Smith, Brianna Mazzaccaro, and **Faisal R. Jahangiri**. “Lumbosacral Spinal Fusion Surgeries.” Chapter. In *Introduction to Neurophysiology*, 115–124. Dubuque, IA: Kendall Hunt Publishing, 2023.

9. Emily Appel, and **Faisal R. Jahangiri**. “Femoral Nerve Monitoring During Lateral Spine Surgeries.” Chapter. In *Introduction to Neurophysiology*, 125–130. Dubuque, IA: Kendall Hunt Publishing, 2023.
10. **Jahangiri, Faisal R**, and Rabehah A. Asdi. “External Urinary Sphincter Muscles Recordings During Spine Surgeries.” Chapter. In *Introduction to Neurophysiology*, 131-140. Dubuque, IA: Kendall Hunt Publishing, 2023.
11. **Jahangiri, Faisal R.**, Rafia H. Jahangiri, Hooria Asad, Laila Farooq & Wadana H. Khattak. “Scoliosis” Chapter. In *Introduction to Neurophysiology*, 141-154. Dubuque, IA: Kendall Hunt Publishing, 2023.
12. Bennett, Gabrielle, Rabehah A. Asdi, Hiral Gorasia, Tal Allouche, Suen K. Chun, and **Faisal R. Jahangiri**. “Dorsal Root Rhizotomy for Cerebral Palsy.” Chapter. In *Introduction to Neurophysiology*, 155-162. Dubuque, IA: Kendall Hunt Publishing, 2023.
13. Chalamalasetty, Prasanth, Shruthi Ravikumar, Anwara Khan, and **Faisal R. Jahangiri**. “Parotid Surgeries” Chapter. In *Introduction to Neurophysiology*, 165-178. Dubuque, IA: Kendall Hunt Publishing, 2023.
14. Blake, India, Jorge Lopez, Haley Puryear, Kelly Williams, Seniha Williams, and **Faisal R. Jahangiri**. “Thyroid Surgeries” Chapter. In *Introduction to Neurophysiology*, 179-190. Dubuque, IA: Kendall Hunt Publishing, 2023.
15. Farhan, Rida, Chen Wang, and **Faisal R. Jahangiri**. “Cranial Nerve Surgeries” Chapter. In *Introduction to Neurophysiology*, 191-212. Dubuque, IA: Kendall Hunt Publishing, 2023.
16. Assi, Zenah, Carmen Salazar, Franz C. Mallalieu, Kathryn Williams, and **Faisal R. Jahangiri**. “Thoracoabdominal Aortic Aneurysm Surgeries” Chapter. In *Introduction to Neurophysiology*, 215-230. Dubuque, IA: Kendall Hunt Publishing, 2023.
17. **Jahangiri, Faisal R.**, Marie Liang, Misty Huckabey, Naomi Baloney, and Sarah Sharifi. “Carotid Endarterectomy Surgeries” Chapter. In *Introduction to Neurophysiology*, 231-242. Dubuque, IA: Kendall Hunt Publishing, 2023.
18. Angel Voon, Cristian Graces, Hoa Nguyen, Nicole Davenport, and **Faisal R. Jahangiri**. “Electroencephalography and Electrocorticography” Chapter. In *Introduction to Neurophysiology*, 243-256. Dubuque, IA: Kendall Hunt Publishing, 2023.
19. Kathryn Williams, Xinyi Win, and **Faisal R. Jahangiri**. “Electroencephalography versus Electroconvulsive Therapy” Chapter. In *Introduction to Neurophysiology*, 259-266. Dubuque, IA: Kendall Hunt Publishing, 2023.
20. **Jahangiri, Faisal R.**, Katharine Pautler, Keri Watters, Sahar S. Anjum, and Gabrielle L. Bennett. “Mapping of the Somatosensory Cortex” Chapter. In *Introduction to Neurophysiology*, 267-276. Dubuque, IA: Kendall Hunt Publishing, 2023.
21. Yildirim, Seniha, Emily Appel, Nwasinachi A. Ezeji, and **Faisal R. Jahangiri**. “Sensory Mapping of the Brain – Median versus Tibial Nerve” Chapter. In *Introduction to Neurophysiology*, 277-284. Dubuque, IA: Kendall Hunt Publishing, 2023.

22. **Jahangiri, Faisal R.**, Marie Liang, Shahab S. Kabir, and Oly Khowash “Motor Mapping of the Brain: Taniguchi versus Penfield Method” Chapter. In *Introduction to Neurophysiology*, 285-298. Dubuque, IA: Kendall Hunt Publishing, 2023.
23. Kabir, Shahab S., Callista Rinesmith, Cristobal Vilches, and **Faisal R. Jahangiri**. “Language Mapping of the Brain” Chapter. In *Introduction to Neurophysiology*, 299-314. Dubuque, IA: Kendall Hunt Publishing, 2023.
24. Fejeran, Joshua, Frank Salazar, Cesia M. Alvarez, and **Faisal R. Jahangiri**. “Deep Brain Stimulation and Microelectrode Recording for the Treatment of Parkinson’s Disease” Chapter. In *Introduction to Neurophysiology*, 315-328. Dubuque, IA: Kendall Hunt Publishing, 2023.
25. Shiwani, Tuba, Yasaman Hooshmandi, Hannah Cabrera, Sarah Wolfe, and **Faisal R. Jahangiri**. “Meta-Analysis Regarding the Effects of Anesthetic Fade on Motor Evoked Potentials (MEP) and Somatosensory Evoked Potentials (SSEPs)” Chapter. In *Introduction to Neurophysiology*, 331-344. Dubuque, IA: Kendall Hunt Publishing, 2023.

Flashcards Published:

Q & A Flashcard Study System for Intraoperative Monitoring

Set 1/ Stack 1

ASET, Kansas City, MO, USA. May 2016

250 Questions and Answers: Flashcards for the IONM exam.



Papers Published:

1. Intraoperative microvascular Doppler ultrasound monitoring in an ovine model of acute spinal cord injury

Qingze Wu¹, Lisa Klopp, MD², Alexander Y. Razumovsky, PhD¹, Thoms G. Lowe, MD³, Lucas Wilson, MS³, Katrina Layman, MS⁴, **Faisal R. Jahangiri, MD⁴**, Jeffrey H. Owen, PhD⁴. ¹Sentient Medical Systems, Inc. (Maryland), Cockeysville, MD, USA; ²Colorado State University, Ft. Collins, CO, USA; ³Woodridge Spine Center, Denver CO, Wheat Ridge, CO, USA; ⁴Sentient Medical Systems, Cockeysville, MD, USA. *The Spine Journal*, 10 September 2004 (Vol. 4, Issue 5, Pages S16-S17)

2. Predicting surgical outcome by Somatosensory Evoked Potentials and Trans-Cranial Electric Motor Evoked Potentials in a Cervical-Medullary Junction Hemangioblastoma

Faisal R. Jahangiri, James J. Persyn, R. Webster Crowley, Neal F. Kassell & Francisco Vega-Bermudez (2010) Predicting Surgical Outcome Using Somatosensory Evoked Potentials and Transcranial Electric Motor Evoked Potentials in a Cervical-Medullary Junction Hemangioblastoma, *American Journal of Electroneurodiagnostic Technology*, 50:2, 101-110, DOI: 10.1080/1086508X.2010.11079761.

3. Intraoperative Neuromonitoring: Lessons learned from 32 case events in 2095 spine cases

Eager M, Jahangiri F, Shimer A, Shen F, Arlet V. Intraoperative neuromonitoring: lessons learned from 32 case events in 2095 spine cases. *Evid Based Spine Care J*. 2010 Aug;1(2):58-61. doi: 10.1055/s-0028-1100917.

4. Protecting the Genitofemoral Nerve during Direct Lateral Interbody Fusion (DLIF/XLIF) Procedures

Jahangiri FR, Sherman JH, Holmberg A, Louis R, Elias J, Vega-Bermudez F. Protecting the genitofemoral nerve during direct/extreme lateral interbody fusion (DLIF/XLIF) procedures. *Am J Electroneurodiagnostic Technol*. 2010 Dec;50(4):321-35.

5. Preventing Position-Related Brachial Plexus Injury with Intraoperative Somatosensory Evoked Potentials (SSEP) and Trans-Cranial Electrical Motor Evoked Potentials (TCeMEP) during Anterior Cervical Spine Surgery

Jahangiri FR, Holmberg A, Vega-Bermudez F, Arlet V. Preventing position-related brachial plexus injury with intraoperative somatosensory evoked potentials and transcranial electrical motor evoked potentials during anterior cervical spine surgery. *Am J Electroneurodiagnostic Technol*. 2011 Sep;51(3):198-205.

6. Limiting the current density during Localization of the Primary Motor Cortex by using a Tangential-Radial Cortical SSEP Model, DECS and Electrocorticography

Jahangiri FR, Sherman JH, Sheehan J, Shaffrey M, Dumont AS, Vengrow M, Vega-Bermudez F. Limiting the current density during localization of the primary motor cortex by using a tangential-radial cortical somatosensory evoked potentials model, direct electrical cortical stimulation, and electrocorticography. *Neurosurgery*. 2011 Oct;69(4):893-8. doi: 10.1227/NEU.0b013e3182230ac3.

7. Intra Operative Neurophysiological Monitoring (IONM): “Lessons Learned from 32 Case Events in 2069 Spine Cases”

Eager M, Shimer A, Jahangiri FR, Shen F, Arlet V. Intraoperative neurophysiological monitoring (IONM): lessons learned from 32 case events in 2069 spine cases. *Am J Electroneurodiagnostic Technol*. 2011 Dec;51(4):247-63.

8. Preventing lower cranial nerve injuries during fourth ventricle tumor resection by utilizing intraoperative neurophysiological monitoring

Faisal R. Jahangiri, MD, CNIM, D.ABNM^{1, 2}; Mazhar Minhas, MD, CNIM¹; John Jane Jr, MD³. ¹Division of Neurology, Dept. of Medicine; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia; ²Impulse Monitoring Inc., Columbia, MD, USA; ³University of Virginia Medical Center, Dept. of Neurosurgery, Charlottesville, VA, USA. The Neurodiagnostic Journal. Dec 2012, 52(4), Pages. ASET, Missouri, USA.

9. Multimodality Neurophysiological Monitoring during Tibial/Fibular Osteotomies for Preventing Peripheral Nerve Injuries

Jahangiri FR. Multimodality neurophysiological monitoring during tibial/fibular osteotomies for preventing peripheral nerve injuries. Neurodiagn J. 2013 Jun;53(2):153-68.

10. Intraoperative Neurophysiological Monitoring during Sacrectomy Procedures

Jahangiri FR, Al Eissa S, Jahangiri AF, Al-Habib A. Intraoperative neurophysiological monitoring during sacrectomy procedures. Neurodiagn J. 2013 Dec;53(4):312-22.

11. Anterior-Posterior Resection of Sacral Tumor with Computer Navigation System

Jahangiri, AF¹; **Jahangiri, FR**². ¹Department of Experimental Medicine, King Abdullah International Medical Research Center; ²Division of Neurology, Department of Medicine, King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia. Bioengineering Conference (NEBEC), 2014 40th Annual Northeast. 2014, 1-2. Accessed: Oct 20, 2015: <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6972822>. 10.1109/NEBEC.2014.6972822

12. Neurophysiological Monitoring of the Spinal Sensory and Motor Pathways during Embolization of Spinal Arterio-Venous Malformation: Propofol a Safe Alternate

Jahangiri FR, Sheryar M, Al Okaili R. Neurophysiological monitoring of the spinal sensory and motor pathways during embolization of spinal arteriovenous malformations--propofol: a safe alternative. Neurodiagn J. 2014 Jun;54(2):125-37.

13. Fulminant Acute Disseminated Encephalomyelitis

Hassan A. Alayafi¹; **Faisal R. Jahangiri**¹; Mukki Almuntashri². ¹Division of Neurology, Department of Medicine; ²Department of Neuroradiology; King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia. Pak J Med Res. Vol. 53, No. 3, July-Sep. 2014.

14. Early detection of pedicle screw related spinal cord injury by continuous intraoperative neurophysiological monitoring (IONM)

Jahangiri FR, Sheryar M, Al Behairy Y. Early detection of pedicle screw-related spinal cord injury by continuous intraoperative neurophysiological monitoring (IONM). Neurodiagn J. 2014 Dec;54(4):323-37.

15. Intraoperative Neurophysiological Monitoring (IONM) For Cordotomy Procedures

Jahangiri FR. Intraoperative Neurophysiological Monitoring (IONM) for Cordotomy Procedures. Neurodiagn J. 2015 Sep;55(3):169-79.

16. Computer-Assisted Navigation During Anterior-Posterior En Bloc Resection of Sacral Tumor

Al Eissa S, Al-Habib AF, Jahangiri FR. Computer-Assisted Navigation During an Anterior-Posterior En Bloc Resection of a Sacral Tumor. Cureus. 2015 Nov 4;7(11):e373. doi: 10.7759/cureus.373.

17. Vertebral Column Resection for Kyphoscoliosis in a Patient with Ehlers-Danlos Syndrome: An Intraoperative Neurophysiological Monitoring Alert.

Jahangiri FR, Al Eissa S, Sayegh S, Al Helal F, Al-Sharif SA, Annaim MM, Muhammad S, Aziz T. Vertebral Column Resection for Kyphoscoliosis in a Patient with Ehlers-Danlos Syndrome: An Intraoperative Neurophysiological Monitoring Alert. *Cureus*. 2016 Aug 31;8(8):e759.

18. Benefit of Intraoperative Neurophysiological Monitoring (IONM) in a Pediatric Patient With Spinal Dismorphysim, Split Cord and Scoliosis

Jahangiri FR, Sayegh SA, Azzubi M, Alrajhi AM, Annaim MM, Al Sharif SA, Aziz T, Al Eissa S. Benefit of Intraoperative Neurophysiological Monitoring in a Pediatric Patient with Spinal Dymorphism, Split Cord Malformation, and Scoliosis. *Neurodiagn J*. 2017;57(4):295-307. doi: 10.1080/21646821.2017.1396780.

19. Multimodality Intraoperative Neurophysiological Monitoring (IONM) in Anterior Hip Arthroscopic Repair Surgeries

Overzet K, Kazewych M, **Jahangiri FR**. Multimodality Intraoperative Neurophysiological Monitoring (IONM) in Anterior Hip Arthroscopic Repair Surgeries. *Cureus*. 2018 Sep 22;10(9):e3346. doi: 10.7759/cureus.3346.

20. Waveform Window #42: Sudden Unexpected Change of Latency during Median Nerve Phase Reversal

Jahangiri FR, Overzet K, Crosier T, Tarasiewicz I. Waveform Window #42: Sudden Unexpected Change of Latency during Median Nerve Phase Reversal. *Neurodiagn J*. 2018;58(3):182-188. doi: 10.1080/21646821.2018.1499305.

21. Practice guidelines for the supervising professional: Intraoperative Neurophysiological Monitoring.

Gertsch JH, Moreira JJ, Lee GR, Hastings JD, Ritzl E, Eccher MA, Cohen BA, Shils JL, McCaffrey MT, Balzer GK, Balzer JR, Boucharel W, Guo L, Hanson LL, Hemmer LB, **Jahangiri FR**, Mendez Vigil JA, Vogel RW, Wierzbowski LR, Wilent WB, Zuccaro JS, Yingling CD; membership of the ASNM. *J Clin Monit Comput*. 2018 Oct 30. doi: 10.1007/s10877-018-0201-9.

22. The incidence of Positioning-Related Intraoperative Neurophysiological Monitoring (IONM) Changes: A Review of 5894 Surgeries”.

Kathryn Overzet¹, Chen Wang^{1,2} and **Faisal Riaz Jahangiri**^{1*}. *1Axis Neuromonitoring LLC, Richardson, TX, USA, 2Graduate Student, Department of Applied Cognition and Neuroscience, University of Texas, Richardson, TX, USA. EC Neurology 11.1 (2019).*

23. Motor Evoked Potentials Recordings from Urethral Sphincter Muscles (USMEP) During Spine Surgeries.

Jahangiri FR, Silverstein JW, Trausch C, Al Eissa S, George ZM, DeWal H, Tarasiewicz I. Motor Evoked Potential Recordings from the Urethral Sphincter Muscles (USMEPs) during Spine Surgeries. *Neurodiagn J*. 2019;59(1):34-44. doi: 10.1080/21646821.2019.1572375.

24. Utilizing Longer Intramuscular Needle Pair Electrodes: What Are We Missing in Our Intraoperative Muscle Recordings?

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM^{1,2}, Courtney Trausch, BS³; ¹Axis Neuromonitoring LLC, Richardson, TX; ²Global Innervations LLC, Dallas, TX; ³Student, Dept. of Applied Cognition and Neuroscience, University of Texas, Richardson, TX. *EC Neurology 11.4 (2019): 288-294.*

25. Intraoperative Triggered Electromyography Recordings from the External Urethral Sphincter Muscles During Spine Surgeries

Faisal R Jahangiri^{1,2}, **Rabehah A. Asdi**³, **Izabela Tarasiewicz**⁴, **Moutasem Azzubi**⁵. ¹Axis Neuromonitoring LLC, Richardson, TX; ²Global Innervations LLC, Dallas, TX; ³Student, Dept. of Applied Cognition and Neuroscience, University of Texas, Richardson, TX; ⁴Dept. of Neurosurgery, University of Texas Health Science Center, San Antonio, TX, USA; ⁵Division of Neurosurgery, Department of Surgery; King Abdulaziz Medical City, Ministry of National Guard Health Affairs, Riyadh, Saudi Arabia. Muacevic A, Adler JR, eds. *Cureus* 11(6): e4867. doi:10.7759/cureus.4867

26. Waveform Window #46: Radial Nerve SSEP (Rn-SSEP): Is it Reliable?

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27. Protecting the Visual Pathways During Optic Nerve Surgery Using Intraoperative Visual Evoked Potentials (VEP)

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12. “Limiting the current density during Localization of the Primary Motor Cortex by using a Tangential-Radial Cortical SSEP Model, DECS and Electrocorticography.”

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14. “Limiting the current density during Localization of the Primary Motor Cortex by using a Tangential-Radial Cortical SSEP Model, DECS and Electrococtigraphy.”

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15. “Protecting the Spinal Cord Sensory and Motor functions during Cordotomy Procedures.”

Faisal R. Jahangiri, MD, CNIM, D.ABNM¹, Gautam Mehta MD², Jeff Elias, MD², Barbara Landesman, MD, FRCP(C)³. ¹*Impulse Monitoring Inc., Columbia, MD*, ²*Department of Neurosurgery, University of Virginia Medical Center, Charlottesville, VA*, ³*Pacific Neuromonitoring Associates, Columbia, MD, USA*. Abstracts published in the proceeding of 22nd ASNM annual meeting 2011. Orlando, FL.

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18. “Localization of the Primary Motor Cortex by using a Tangential-Radial Cortical SSEP Model, DECS, and Electrococtigraphy.”

Faisal Jahangiri, MD, CNIM, D.ABNM¹; R Webster Crowley, MD²; Jeff Elias, MD²; ¹*Impulse Monitoring Inc., Columbia, MD*; ²*University of Virginia Medical Center, Department of Neurosurgery, Charlottesville, VA, USA*. Abstracts published in the abstract book of the meeting “ASET (Neurodiagnostic Society) 2011 Annual Conference”, Co-sponsored by SSET (Southern Society if Electroneurodiagnostic Technologists), Atlanta, GA, USA July 27-30, 2011, p 11.

19. “Preventing the Visual Pathways during Optic Nerve Surgery Using Neurophysiological Monitoring”

Faisal R. Jahangiri, MD, CNIM, D.ABNM¹; Yaser A. Babgi, MD²; Abdullah Bishi²; Mudhed Ajmi²; Neville Russell, MD². ¹*Division of Neurology, Department of Medicine*; ²*Department of Neurosurgery; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia*. Abstracts published in the abstract book of 6th (Saudi Association of Neurological Surgeons) SANS annual meeting 2012: Horizons of Neurosurgery V. Alkhobar, Saudi Arabia. Apr 3-5, 2012, p 72.

20. “Localization of Central Sulcus by Cortical Sensory Mapping, Direct Cortical Motor Stimulation and Electroencephalography”

Faisal R. Jahangiri, MD, CNIM, D.ABNM¹, Yaser A. Babgi, MD²; Mudhed Ajmi¹, Merdas H. AlOtaibi, MD². ¹*Division of Neurology, Department of Medicine;* ²*Department of Neurosurgery; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia.* Abstracts published in the abstract book of 6th (Saudi Association of Neurological Surgeons) SANS annual meeting 2012: Horizons of Neurosurgery V. Alkhobar, Saudi Arabia. Apr 3-5, 2012, p 71.

21. “Protecting the Spinal Cord Sensory and Motor Functions during Cordotomy Procedures”

Faisal R. Jahangiri, MD, CNIM, D.ABNM^{1,2}, Gautam Mehta MD³, Jeff Elias, MD³, Barbara Landesman, MD, FRCP(C)⁴. ¹*Division of Neurology, Department of Medicine, King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia,* ¹*Impulse Monitoring Inc., Columbia, MD,* ³*Department of Neurosurgery, University of Virginia Medical Center, Charlottesville, VA, USA,* ⁴*Pacific Neuromonitoring Associates, Columbia, MD, USA.* Abstracts published in the proceeding of 6th SANS (Saudi Association of Neurological Surgeons) annual meeting 2012: Horizons of Neurosurgery V. Alkhobar, Saudi Arabia. Apr 3-5, 2012, p27.

22. “Preventing lower cranial nerve injuries during fourth ventricle tumor resection by utilizing IOM”

Faisal R. Jahangiri, MD, CNIM, D.ABNM^{1,2}; Mazhar Minhas, MS, MD²; Brian Williams, MD³; John Jane Jr., MD³. ¹*Division of Neurology, Department of Medicine; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia;* ²*Impulse Monitoring Inc., Columbia, MD, USA;* ³*Department of Neurosurgery, University of Virginia Medical Center, Charlottesville, VA, USA.* Abstracts published in proceedings of the Annual American Society of Neurophysiological Monitoring (ASNM) meeting. Salt Lake City, UT, USA. May 4-6, 2012.

23. “Multimodality Neurophysiological Monitoring in Tibial/Fibular Osteotomies for preventing Peripheral Nerve Injuries”

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25. “Localization of Central Sulcus by Cortical Sensory Mapping, Direct Cortical Motor Stimulation and Electroencephalography”

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26. “Establishment of Normal Visual Evoked Potentials (VEPs) Values in Adult Saudi Males”

Ahmed Abulaban, MBBS¹; **Faisal R. Jahangiri, MD, CNIM, D.ABNM¹**, Hussein Malibary². ¹*Division of Neurology, Department of Medicine; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia;* ²*Department of Medicine; King Abdulaziz University Hospital, Jeddah, Saudi Arabia.* Abstracts published in the proceeding of King Saud Bin Abdulaziz University for Health Sciences 15th Resident’s Day, Riyadh, National Guard Health Affairs, Saudi Arabia. Dec 4th, 2012, page 36.

27. “Neurophysiologic Monitoring during Spine Surgeries: A luxury or Necessity?”

Faisal R. Jahangiri, MD, CNIM, D.ABNM. *Division of Neurology, Department of Medicine; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia.* Abstract published in proceedings of 2nd Saudi International Conference on Intra Operative Neurophysiology, Tufts School of Medicine & King Fahad Medical City, Riyadh, Saudi Arabia. March 18, 2013, p 46.

28. “Preventing Cranial Nerve Injuries during High-Risk Brain Surgeries”

Faisal R. Jahangiri, MD, CNIM, D.ABNM. *Division of Neurology, Department of Medicine; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia.* Abstract published in proceedings of 2nd Saudi International Conference on Intra Operative Neurophysiology, Tufts School of Medicine & King Fahad Medical City, Riyadh, Saudi Arabia. March 18, 2013, page 31.

29. “Intraoperative Neurophysiological Monitoring during High-Risk Skull Base Surgeries”

Faisal R. Jahangiri, MD, CNIM, D.ABNM. *Division of Neurology, Department of Medicine; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia.* Abstract published in proceedings of the Annual American Society of Neurophysiological Monitoring (ASNM) meeting. Boston, MA, USA. May 3-5, 2013.

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Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM. *Division of Neurology, Department of Medicine; ²Department of Neurosurgery; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia.* Abstracts published in the proceeding of the Department of Medicine: 14th Research Day, Riyadh, Saudi Arabia. May 22, 2013; page 28.

31. “Multimodality Neurophysiological Monitoring in Tibial/Fibular Osteotomies for preventing Peripheral Nerve Injuries.”

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM. *Division of Neurology, Department of Medicine; ²Department of Neurosurgery; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia.* Abstracts published in the proceeding of the Department of Medicine: 14th Research Day, Riyadh, Saudi Arabia. May 22, 2013; page 26.

32. “Localization of Cortical Language Areas by Direct Cortical Motor Stimulation (DECS) and Electrocorticography (ECoG).”

Faisal R Jahangiri, MD, CNIM, D.ABNM, FASNM¹; Anila F Jahangiri, PhD²; Ahmed Abulaban, MBBS¹; Nasser Tawfeeq, MD³; Merdas H. AlOtaibi, MD⁴. ¹Division of Neurology, Department of Medicine; ²King Abdullah International Medical Research Center; ³Department of Anesthesiology; ⁴Division of Neurosurgery, Department of Surgery; King Abdulaziz Medical City, Riyadh, Saudi Arabia. Abstracts published in the proceeding of 16th Resident’s Day, Postgraduate Medical Education & Academic Affairs, King Abdulaziz Medical City; Riyadh, Saudi Arabia.

33 “Early Detection of Pedicle Screw related Spinal Cord Injury by Intraoperative Neurophysiological Monitoring (IONM)”

Faisal R Jahangiri, MD, CNIM, D.ABNM, FASNM¹; Muhammad Sheryar, MBBS²; Anila F Jahangiri, PhD³; Yaser Al Behairy, MD, FRCSC⁴. ¹Division of Neurology, Department of Medicine; ²Department of Anesthesia; ³Department of Experimental Medicine, King Abdullah International Medical Research Center; ⁴Division of Orthopedics, Department of Surgery King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia; Abstract published in proceedings of 8th Saudi Association of Neurological Surgery (SANS) & National Neuroscience Institute (NNI-KFMC) Annual Meeting, Riyadh, Saudi Arabia. April 15-17, 2014, (S6), page 34.

34. “Intraoperative Neurophysiological Monitoring during Sacrectomy Procedures”

Faisal R Jahangiri, MD, CNIM, D.ABNM, FASN¹; Sami Al Eissa, MD²; Anila F Jahangiri, PhD³; Amro Al-Habib, MD, FRCSC, MPH⁴

¹Division of Neurology, Department of Medicine; ²Division of Orthopedics, Department of Surgery; ³Department of Experimental Medicine, King Abdullah International Medical Research Center; King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia; ⁴Neurosurgery Division, Department of Surgery, College of Medicine, King Saud University, Riyadh, Saudi Arabia. Abstract published in proceedings of 8th Saudi Association of Neurological Surgery (SANS) & National Neuroscience Institute (NNI-KFMC) Annual Meeting, Riyadh, Saudi Arabia. April 15-17, 2014, (F6) page 106.

35. “Preventing Lower Cranial Nerve Injuries during Fourth Ventricle Tumor Resection by IONM”

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASN¹; Mazhar Minhas, MD, CNIM²; John Jane Jr, MD³. ¹Division of Neurology, Dept. of Medicine; King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia; ²Impulse Monitoring Inc., Columbia, MD, USA; ³University of Virginia Medical Center, Dept. of Neurosurgery, Charlottesville, VA, USA. Abstract published in proceedings of 8th Saudi Association of Neurological Surgery (SANS) & National Neuroscience Institute (NNI-KFMC) Annual Meeting, Riyadh, Saudi Arabia. April 15-17, 2014, (F8) page 108.

36. “Anterior-Posterior Resection of Sacral Tumor with Computer Navigation System”

Anila F Jahangiri, PhD^{1, 2}; **Faisal R Jahangiri, MD, CNIM, D.ABNM, FASN^{2, 3}**. ¹Department of Experimental Medicine, King Abdullah International Medical Research Center, Riyadh, Saudi Arabia; ²Jahangiri Consulting LLC, Charlottesville, VA, USA; ³Division of Neurology, Department of Medicine; King Fahad National Guard Hospital, Riyadh, Saudi Arabia; Abstracts published in proceeding of NEBEC 2014: 40th Annual Northeast Bioengineering Conference. Boston, MA. April 2014.

37. “Intraoperative Neurophysiological Monitoring during Sacrectomy Procedures.”

Faisal R Jahangiri, MD, CNIM, D.ABNM, FASN¹; Sami Al Eissa, MD²; Anila F Jahangiri, PhD³; Amro Al-Habib, MD, FRCSC, MPH⁴. ¹Division of Neurology, Department of Medicine; ²Division of Orthopedics, Department of Surgery; ³Department of Experimental Medicine, King Abdullah International Medical Research Center; King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia; ⁴Neurosurgery Division, Department of Surgery, College of Medicine, King Saud University, Riyadh, Saudi Arabia. Abstract published in the proceeding of the 25th ASN¹ annual meeting 2014. Chicago, IL. May 2014.

38. “Early Detection of Pedicle Screw related Spinal Cord Injury by Intraoperative Neurophysiological Monitoring (IONM)”

Faisal R Jahangiri, MD, CNIM, D.ABNM, FASN¹; Muhammad Sheryar, MBBS²; Yaser Al Behairy, MD, FRCSC⁴. ¹Division of Neurology, Department of Medicine; ²Department of Anesthesia; ³Division of Orthopedics, Department of Surgery King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia. Abstracts published in the proceeding of 25th ASN¹ annual meeting 2014. Chicago, IL. May 2014.

39. “Early Detection of Pedicle Screw related Spinal Cord Injury by Intraoperative Neurophysiological Monitoring (IONM)”

Faisal R Jahangiri, MD, CNIM, D.ABNM, FASN¹; Muhammad Sheryar, MBBS²; Yaser Al Behairy, MD, FRCSC⁴. ¹Division of Neurology, Department of Medicine; ²Department of Anesthesia; ³Division of Orthopedics, Department of Surgery King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia. Abstracts published in the proceeding of ASET annual meeting 2014. Asheville, NC. Aug 2014. Page 14.

40. “Continuous Intraoperative Neurophysiological Monitoring (IONM) For Early Detection of Pedicle Screw related Spinal Cord Injury”

Faisal R Jahangiri, MD, CNIM, D.ABNM, FASN¹; Muhammad Sheryar, MBBS²; Yaser Al Behairy, MD, FRCSC⁴. ¹Division of Neurology, Department of Medicine; ²Department of Anesthesia; ³Division of Orthopedics, Department of Surgery King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia. Abstracts published in the proceeding of ISIN (International Society of Neurophysiological Monitoring) annual meeting 2014. Istanbul, Turkey. Oct 2014. Page.

41. “Utilizing Longer Intramuscular Needle Pair Electrodes: What are we really missing in our Intraoperative Muscle Recordings?”

Faisal R Jahangiri, MD, CNIM, D.ABNM, FASNM; Division of Neurology, Department of Medicine; Department of Surgery King Fahad National Guard Hospital, King Abdulaziz Medical City, Riyadh, Saudi Arabia. Abstracts published in the proceeding of ASET annual meeting 2015. Weston, FL. July-Aug 2015.

42. A Vertebral Column Resection (VCR) for Kyphoscoliosis: An Intraoperative Neurophysiological Monitoring (IONM) Alert

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM¹; Sami Al Eissa, MD²; Samir Al Sayegh, MD²; Fahad Al Helal, MD²; Shmoukh A. M. Al-Sharif³; Monerah M. Annaim³; Tanweer Aziz, MD⁴. ¹Division of Neurology, Department of Medicine; ²Division of Orthopedics, Department of Surgery; ³College of Medicine-Female, KSAU-HS; ⁴Department of Anesthesiology; King Abdulaziz Medical City, Ministry of National Guard Health Affairs, Riyadh, Saudi Arabia. Abstracts published in the proceeding of ASNM annual meeting 2016. Chicago, IL. May 2016.

43. A Vertebral Column Resection (VCR) for Kyphoscoliosis: An Intraoperative Neurophysiological Monitoring (IONM) Alert

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM¹; Sami Al Eissa, MD²; Samir Al Sayegh, MD²; Fahad Al Helal, MD²; Shmoukh A. M. Al-Sharif³; Monerah M. Annaim³; Tanweer Aziz, MD⁴. ¹Division of Neurology, Department of Medicine; ²Division of Orthopedics, Department of Surgery; ³College of Medicine-Female, KSAU-HS; ⁴Department of Anesthesiology; King Abdulaziz Medical City, Ministry of National Guard Health Affairs, Riyadh, Saudi Arabia. Abstract published in the proceeding of the ASET annual meeting 2016. Pittsburg, PA. Aug 2016. p.

44. Benefit of Intraoperative Neurophysiological Monitoring (IONM) in a Pediatric Patient With Spinal Dysmorphism, Split Cord and Scoliosis

Faisal R. Jahangiri,^{1,2} Samir Al Sayegh³, Moutasem Azzubi⁴, Abdulrahman M. Alrajhi⁵, Monerah M. Annaim⁶, Shmoukh A. Al Sharif⁶, Tanweer Aziz⁷, Sami Al Eissa³. ¹Division of Neurology, Dept. of Medicine; ³Division of Orthopedics, Dept. of Surgery; ⁴Division of Neurosurgery, Dept. of Surgery; ⁶College of Medicine-Female, KSAU-HS; ⁷Dept. of Anesthesia, King Abdulaziz Medical City, Ministry of National Guard Health Affairs, Riyadh, Saudi Arabia; ⁵College of Medicine – King Saud University, Riyadh, Saudi Arabia; ²Jahangiri Consulting LLC, Charlottesville, Virginia, USA. Abstract published in the proceeding of the ASET annual meeting 2017. Tuscon, AZ. Aug 2017.

45. IONM During Hip Arthroscopic Repair Surgeries.

Kathryn Overzet CNIM¹; Mark Kazewych MD²; **Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM**¹; ¹Axis Neuromonitoring LLC, Richardson, TX; ²Baylor Orthopedic and Spine Hospital, Arlington, TX. Abstract published in the proceeding of the ASNM annual meeting 2018. Orlando, FL, Feb 2018.

46. Incidence of IONM Data Changes Due to Positioning in 4577 Surgeries.

Kathryn Overzet CNIM¹; **Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM**¹. ¹Axis Neuromonitoring LLC, Richardson, TX. Abstracts published in the proceeding of ASNM annual meeting 2018. Orland, FL, Feb 2018.

47. Motor Evoked Potentials (MEP) Recordings from Urethral Electrodes.

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM^{1,2}; Justin W. Silverstein, DHSC, CNIM³; Zachariah M. George MD⁴; Sami Al Eissa, MD⁵. ¹Axis Neuromonitoring LLC, Richardson, TX; ²Division of Neurology, King Abdulaziz Medical City, Riyadh, Saudi Arabia; ³Neuroprotective Solutions, Long Island, NY; ⁴Neurological Surgery PC, Long Island, NY; ⁵Division of Orthopedics, Dept. of Surgery, King Abdulaziz Medical City, Riyadh, Saudi Arabia; Abstracts published in the proceedings of ASNM annual meeting 2018. Orlando, FL, Feb 2018.

48. IONM During Hip Arthroscopic Repair Surgeries.

Kathryn Overzet CNIM¹; Mark Kazewych MD²; **Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM**¹. ¹Axis Neuromonitoring LLC, Richardson, TX; ²Baylor Orthopedic and Spine Hospital, Arlington, TX. Abstracts published in the proceeding of ASET annual meeting 2018. New Orleans, LA, Aug 2018.

49. Incidence of IONM Data Changes Due to Positioning in 4577 Surgeries.

Kathryn Overzet CNIM¹; **Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM**¹. ¹Axis Neuromonitoring LLC, Richardson, TX. Abstracts published in the proceeding of ASET annual meeting 2018. New Orleans, LA, Aug 2018.

50. Motor Evoked Potentials (MEP) Recordings from Urethral Sphincter Muscles (USMEP).

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM^{1,2}; Justin W. Silverstein, DHSC, CNIM³; Zachariah M. George MD⁴; Sami Al Eissa, MD⁵; Izabela Tarasiewicz, MD, FRCS (C)⁶. ¹Axis Neuromonitoring LLC, Richardson, TX; ²Neuroprotective Solutions, Long Island, NY; ³Neurological Surgery PC, Long Island, NY; ⁴Division of Orthopedics, Dept. of Surgery, King Abdulaziz Medical City, Riyadh, Saudi Arabia; ⁵Dept. of Neurosurgery, University of Texas Health Science Center, San Antonio, TX. Abstracts published in the proceedings of ASET annual meeting 2018. New Orleans, LA, Aug 2018.

51. Motor Evoked Potentials (MEP) Recordings from Urethral Sphincter Muscles (USMEP).

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM; Justin W. Silverstein, DHSC, CNIM; Zachariah M. George MD; Sami Al Eissa, MD, Izabela Tarasiewicz, MD, FRCS (C). Abstracts published in the proceedings of ASNM annual meeting 2019. Chicago, IL, May 2019.

52. Adjuncting Linked Quadri-polar (LQP) and Preconditioning Stimulation Technique to Improve TCeMEPs During Spinal Tumor Resection. a Case Report

Vizmary J. Montes Pena, MD, MS; **Faisal Jahangiri, MD, CNIM, D.ABNM, FASNM, FASET**; Faye Alenazy; Saad AlQahtani, MD, MEd, FRCSC; David Pinilla Arias, MD; Muhammad Tariq, MBBS, FCPS, FCARCI. Abstract published in the proceedings of American Clinical Neurophysiology (ACNS) annual meeting 2021. Virtual, Feb 2021, p 38.

53. Optimizing TCeMEP Stimulation for Intraoperative Neurophysiological Monitoring (IONM) in Pediatric Patients. a Case Report

Vizmary J. Montes Pena, MD, MS; **Faisal Jahangiri, MD, CNIM, D.ABNM, FASNM, FASET**; Faye Alenazy; Wael A. Alshaya, MBBS, FRCSC; Samir O. Alsayegh, MBBS; Mejhed Darwish, MChB. . Abstract published in the proceedings of American Clinical Neurophysiology (ACNS) annual meeting 2021. Virtual, Feb 2021, p 39.

54. Protecting the Visual Pathways During Optic Nerve Surgery Using Intraoperative Visual Evoked Potentials (VEP)

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM, FASET; Sidra Ilyas, MD; Rabehah A. Asdi, BS; Esther Escobedo, MS, CNIM; Michael Seals, MD. Abstract published in the proceedings of American Clinical Neurophysiology (ACNS) annual meeting 2021. Virtual, Feb 2021, p 39.

55. Intraoperative Triggered Electromyography Recordings from the External Urethral Sphincter Muscles During Spine Surgeries

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNM, FASET; Rabehah A. Asdi, BS; Izabela Tarasiewicz, MD, FRCS©; Moutasem Azzubi, MD. . Abstract published in the proceedings of American Clinical Neurophysiology (ACNS) annual meeting 2021. Virtual, Feb 2021, p 42.

56. Multimodality Intraoperative Neurophysiological Monitoring (IONM) During Shoulder Surgeries

Dr. Faisal R. Jahangiri CV

Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASN, FASET; James Blaylock, DC, CNIM; Nida Qadir, MD; Jason A. Ramsey, MD. Abstract published in the proceedings of American Clinical Neurophysiology (ACNS) annual meeting 2021. Virtual, Feb 2021, p 43.

57. Events and Alerts Identified by IONM in 2,599 Lumbar Surgeries.

Faisal R. Jahangiri MD, CNIM, D.ABNM, FASN, FASET, Kathryn Overzet, Hiral Gorasia, Haley Puryear, Tal Allouche, Elizabeth Ekvall, John Moorman, Nicholas Bathurst. Abstract published in the proceedings of The 30th Annual Virtual Meeting of the American Society of Neurophysiological Monitoring (ASNM), May 2021.

58. Motor Evoked Potentials (MEP) Alerts in Extradural Lumbar Surgeries.

Faisal R. Jahangiri MD, CNIM, D.ABNM, FASN, FASET, Kathryn Overzet, Hiral Gorasia, Haley Puryear, Tal Allouche, Elizabeth Ekvall, John Moorman. Abstract published in the proceedings of The 30th Annual Virtual Meeting of the American Society of Neurophysiological Monitoring (ASNM), May 2021.

59. Distal Saphenous Somatosensory Evoked Potentials loss and Recovery in Open Anterior Hip Surgery.

Kathryn Overzet, MS, CNIM; Angela Goodlin, BS; **Faisal R. Jahangiri MD, CNIM, D.ABNM, FASN, FASET**. Abstract published in the proceedings of The 30th Annual Virtual Meeting of the American Society of Neurophysiological Monitoring (ASNM), May 2021.

60. Pediatric Intraoperative Neuromonitoring: Optimizing Transcranial electrical Motor Evoked Potentials (TCeMEP) stimulation parameters to improve monitoring reliability.

Vizmary J. Montes Pena MD, MS; Faye Alenazy; Dr. Wael A. Alshaya, MBBS, FRCSC; Dr. Samir O. AlSayegh, MBBS; Dr. **Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASN, FASET**; Dr. Ernesto Lima, MD, CNIM, D.ABNM; Dr. Bernard Cohen, PhD, FASN, FACNS. Abstract published in the proceedings of The 30th Annual Virtual Meeting of the American Society of Neurophysiological Monitoring (ASNM), May 2021.

61. Adjuncting Linked Quadri-polar (LQP) and Preconditioning Stimulation Technique to Improve TCeMEPs During Spinal Tumor Resection. a Case Report

Vizmary J. Montes Pena, MD, MS; **Faisal Jahangiri, MD, CNIM, D.ABNM, FASN, FASET**; Faye Alenazy; Saad AlQahtani, MD, MEd, FRCSC; David Pinilla Arias, MD; Muhammad Tariq, MBBS, FCPS, FCARCI. Abstract published in the proceedings of The 2nd Joint meeting of the Spanish and Finnish Societies of Clinical Neurophysiology, Jun 2021. Virtual.

62. Optimizing TCeMEP Stimulation for Intraoperative Neurophysiological Monitoring (IONM) in Pediatric Patients. a Case Report

Vizmary J. Montes Pena, MD, MS; **Faisal Jahangiri, MD, CNIM, D.ABNM, FASN, FASET**; Faye Alenazy; Wael A. Alshaya, MBBS, FRCSC; Samir O. Alsayegh, MBBS; Mejahed Darwish, MBChB. . Abstract published in the proceedings of The 2nd Joint meeting of the Spanish and Finnish Societies of Clinical Neurophysiology, Jun 2021. Virtual.

63. Events and Alerts Identified by IONM in 2,599 Lumbar Surgeries

Faisal R. Jahangiri MD, CNIM, D.ABNM, FASN, FASET, Kathryn Overzet, Hiral Gorasia, Haley Puryear, Tal Allouche, Elizabeth Ekvall, John Moorman, Nicholas Bathurst. Abstract published in the proceedings of World Congress on Neurorehabilitation, Jul 2021. Virtual, Paris, France.

Online Blogs:

- 1. IONM During Hip Arthroscopic Repair Surgeries.**
<https://blog.axisneuromonitoring.com>. Jan 24, 2018.
- 2. Incidence of IONM Data Changes Due to Patient Positioning in 4,577 surgeries.**
<https://blog.axisneuromonitoring.com>. Feb 07, 2018.
- 3. Motor Evoked Potential (TCeMEP) Recordings from Urethral Electrodes.**
<https://blog.axisneuromonitoring.com>. Mar 05, 2018.
- 4. Utilizing longer intramuscular needle pair electrodes. What are we really missing in our Intraoperative Muscle Recordings?** <https://blog.axisneuromonitoring.com>. Apr 16, 2018.
- 5. Continuous Intraoperative Neurophysiological Monitoring (IONM) for Early Detection and Prevention of Pedicle Screw related Spinal Cord Injury.** <https://blog.axisneuromonitoring.com>. May 08, 2018.
- 6. Language Mapping During Awake Brain Surgeries.**
<https://blog.axisneuromonitoring.com>. Jun 04, 2018.
- 7. Use of Intraoperative Neurophysiological Monitoring (IONM) during Selective Dorsal Root Rhizotomy (SDR) Procedures for the Treatment of Spasticity in Patients with Cerebral Palsy.**
<https://blog.axisneuromonitoring.com>. Jul 24, 2018.
- 8. Multimodality Intraoperative Neurophysiological Monitoring (IONM) for Preventing Cranial Nerve Injuries during High-Risk Brain Surgeries.** <https://blog.axisneuromonitoring.com>. Aug 07, 2018.
- 9. Train of Four (TOF) Monitoring: Are We Doing It The Right Way?**
<https://blog.axisneuromonitoring.com>. Sep 11, 2018.
- 10. Multimodality IONM in Anterior Hip Arthroscopic Repair Surgeries.**
<https://blog.axisneuromonitoring.com>. Oct 2, 2018.
- 11. Vertebral Column Resection for Kyphoscoliosis in a Patient with Ehlers-Danlos Syndrome: An Intraoperative Neurophysiological Monitoring Alert.** <https://blog.axisneuromonitoring.com>. Nov 1, 2018.
- 12. The incidence of Positioning-Related Intraoperative Neurophysiological Monitoring (IONM) Changes A Review of 5894 Surgeries.** <https://blog.axisneuromonitoring.com>. Jan 02, 2019.
- 13. Motor Evoked Potentials Recordings from Urethral Sphincter Muscles (USMEPs) During Spine Surgeries.** <https://blog.axisneuromonitoring.com>. Mar 27, 2019.
- 14. Utilizing Longer Intramuscular Needle Pair Electrodes: What Are We Missing in Our Intraoperative Muscle Recordings?** <https://blog.axisneuromonitoring.com>. Apr 25, 2019.
- 15. Triggered EMG Recordings from Urethral Electrodes.**
<https://blog.axisneuromonitoring.com>. May 30, 2019.
- 16. Intraoperative Triggered Electromyography Recordings from the External Urethral Sphincter Muscles During Spine Surgeries.** <https://blog.axisneuromonitoring.com>. Jun 19, 2019.
- 17. Improving the Patient Outcomes by Utilization of Intraoperative Neurophysiological Monitoring (IONM) During Spine Surgery: Case Report.** <https://blog.axisneuromonitoring.com>. Jul 29, 2019.

- 18. Improving the Patient Outcomes by Utilization of Intraoperative Neurophysiological Monitoring (IONM) During Hip Replacement Surgery: Case Report.** <https://blog.axisneuromonitoring.com>. Aug 06, 2019.
- 19. Recording Radial Nerve Somatosensory Evoked Potentials (Rn-SSEP) During Shoulder Surgeries.** <https://blog.axisneuromonitoring.com>. Sep 06, 2019.
- 20. Recurrent Laryngeal Nerve (RLN) EMG Monitoring during Cervical Spine Surgeries**
<https://blog.axisneuromonitoring.com>. Oct 30, 2019
- 21. Minimizing Neurological Deficits by Electromyography (EMG) Monitoring During Lateral Lumbar Spine Surgeries.** <https://blog.axisneuromonitoring.com>. Nov 27, 2019
- 22. Protecting the Visual Pathways During Optic Nerve Surgery Using Intraoperative Visual Evoked Potentials (VEP).** <https://blog.axisneuromonitoring.com>. Dec 17, 2019
- 23. Intraoperative Neurophysiological Monitoring (IONM) During Trigeminal Schwannoma Surgery.**
<https://blog.axisneuromonitoring.com>. Jan 11, 2020
- 24. Protecting the Visual Pathways During Optic Nerve Surgery Using Intraoperative Visual Evoked Potentials (VEP)**
<https://blog.axisneuromonitoring.com>. Feb 15, 2020
- 25. Bulbocavernosus Reflex (BCR) Monitoring During Intramedullary Conus Tumor Surgery**
<https://blog.axisneuromonitoring.com>. Mar 13, 2020
- 26. Mapping of the Somatosensory Cortex**
<https://blog.axisneuromonitoring.com>. Apr 09, 2020
- 27. Intraoperative Neurophysiological Monitoring (IONM) During Peripheral Nerve Hand Surgeries**
<https://blog.axisneuromonitoring.com>. Jun 03, 2020
- 28. Intraoperative Neurophysiological Monitoring (IONM) Role in Tibial and Fibular Osteotomy in Pediatric Surgeries**
<https://blog.axisneuromonitoring.com>. Jul 30, 2020
- 29. Intraoperative Neurophysiological Monitoring for Brainstem Tumor Surgeries**
<https://blog.axisneuromonitoring.com>. Aug 27, 2020
- 30. Mapping of the Motor Cortex**
<https://blog.axisneuromonitoring.com>. Sep 30, 2020
- 31. Electromyogram (EMG) Monitoring During Lumbar Laminectomy & Decompression Surgeries**
<https://blog.axisneuromonitoring.com>. Oct. 30, 2020
- 32. Distal Stimulation Site at the Medial Tibia for Saphenous Nerve Somatosensory Evoked Potentials (DSn-SSEPs) in Lateral Lumbar Spine Procedures**
<https://blog.axisneuromonitoring.com>. Jul 01, 2021
- 33. Intraoperative Neurophysiological Monitoring (IONM) Alerts In 2,599 Lumbar Spine Procedures**
<https://blog.axisneuromonitoring.com>. Aug. 19, 2021

Master Thesis Supervision:

Efficacy of intraoperative neurophysiological monitoring in detecting and preventing injury during high-risk brain aneurysm surgeries.

MS Thesis: Sohail Razaq

External supervisor, Wayne State University, Detroit, Michigan, USA. 2005.

Invited Guest Speaker:

Sep 2021	ASNM Fall Virtual Symposium American Society of Neurophysiological Monitoring-ASNM <i>"Spotlight on Recent Literature: Arterial collateral anatomy predicts the risk for intra operative changes in somatosensory evoked potentials in patients undergoing carotid endarterectomy: a prospective cohort study. Mandy D. Müller et al"</i>	Virtual, USA
May 2021	ASNM 30 th Annual Virtual Meeting American Society of Neurophysiological Monitoring-ASNM <i>"Mapping of the Motor Cortex: Penfield vs. Taniguchi"</i>	Virtual, USA
Feb 2021	ASNM Winter Virtual Symposium American Society of Neurophysiological Monitoring-ASNM <i>"Application of Train of Four (TOF)"</i>	Virtual, USA
Jan 2021	Axis Neuromonitoring Annual Winter Workshop & Symposium <i>"Monopolar vs. Bipolar Stimulation"</i>	Virtual, TX, USA
Jan 2021	Axis Neuromonitoring Annual Winter Workshop & Symposium <i>"MEP for Brain Surgeries"</i>	Virtual, TX, USA
Jan 2021	Axis Neuromonitoring Annual Winter Workshop & Symposium <i>"SSEP: Brain vs. Spine Surgeries"</i>	Virtual, TX, USA
Dec 2020	Comprehensive EEG Course <i>"Neuroanatomy for Electroencephalography (EEG)"</i>	Virtual, Riyadh, KSA
Nov 2020	Pre-Conference IONM Workshop Saudi Spine Society 4 th Annual Meeting <i>"IONM For Spinal Instrumentation Surgeries"</i>	Virtual, Riyadh, KSA
Sep 2020	ASNM Fall Virtual Symposium American Society of Neurophysiological Monitoring-ASNM <i>"Spine IONM: Diagnostic Vs. Therapeutic Efficacy"</i>	Virtual, USA
Feb 2020	ASNM Winter Virtual Symposium American Society of Neurophysiological Monitoring-ASNM <i>"Bipolar and Monopolar Brain Stimulation"</i>	Virtual, USA
Jan 2020	Axis Neuromonitoring Annual Winter Seminar & Workshop <i>'IONM Case Presentations"</i>	Dallas, TX, USA

Jan 2020	Axis Neuromonitoring Annual Winter Seminar & Workshop <i>'Vascular Surgeries: What and How to Monitor?'</i>	Dallas, TX, USA
Jan 2020	Axis Neuromonitoring Annual Winter Seminar & Workshop <i>'Troubleshooting for IONM'</i>	Dallas, TX, USA
Jan 2020	Axis Neuromonitoring Annual Winter Seminar & Workshop <i>'Anesthesia in Depth'</i>	Dallas, TX, USA
Sep 2019	ASNM Fall Symposium American Society of Neurophysiological Monitoring <i>"SSEP: Understanding the Waveforms and Their Generators"</i>	Boston, MA, USA
May 2019	ASNM Annual Meeting American Society of Neurophysiological Monitoring <i>"Neuromonitoring for Spinal Instrumentation Procedures"</i>	Chicago, IL, USA
Apr 2019	Atlantic Health Overlook NeuroConference <i>Neuromonitoring for Awake Craniotomies"</i>	Summit, NJ
Feb 2019	ASNM Winter Symposium American Society of Neurophysiological Monitoring <i>"SSEP: Knowing the Pathways, Generators & the Recording Sites"</i>	Westlake Village, CA, USA
Jan 2019	Axis Neuromonitoring Annual Winter Seminar & Workshops <i>'IONM for Awake Craniotomies"</i>	Dallas, TX, USA
Jan 2019	Axis Neuromonitoring Annual Winter Seminar & Workshops <i>'IONM for Parotid and Thyroid Surgeries"</i>	Dallas, TX, USA
Jan 2019	Axis Neuromonitoring Annual Winter Seminar & Workshops <i>"Selective Dorsal Root Rhizotomy & Spinal Cord Mapping"</i>	Dallas, TX, USA
Jan 2019	Axis Neuromonitoring Annual Winter Seminar & Workshops <i>Hands-on Workshops</i> <ul style="list-style-type: none"> ▪ <i>Head Measurement: International 10-20 System</i> ▪ <i>Train of Four (TOF)</i> ▪ <i>Brainstem Auditory Evoked Potentials (BAEP)</i> 	Dallas, TX, USA
Nov 2018	Pre-Conference IONM Workshop Saudi Spine Society 2 nd Annual Meeting <i>"IONM For Spine"</i>	Jeddah, KSA
Nov 2018	Saudi Spine Society 2 nd Annual Meeting <i>"IONM Updates For Spinal Procedures."</i>	Jeddah, KSA
Nov 2018	SSET Annual Meeting <i>"Parotid and Thyroid Surgery Monitoring Techniques"</i>	Dallas, TX, USA

Nov 2018	SSET Annual Meeting <i>"Monitoring Selective Dorsal Root Rhizotomies"</i>	Dallas, TX, USA
Aug 2018	ASET Annual Meeting The Neurodiagnostic Society <i>"SSEP: Knowing the Pathways & Recording Sites"</i>	New Orleans, LA, USA
April 2018	GSHRM Greater Houston Society for Hospital Risk Management <i>"IONM: A Brief Overview of Science and Benefits"</i>	Houston, TX, USA
Feb 2018	ASNM Annual Meeting American Society of Neurophysiological Monitoring <i>"Cortical Mapping in Awake Surgeries"</i>	Orlando, FL, USA
Feb 2018	ASNM Annual Meeting American Society of Neurophysiological Monitoring <i>"Neuromonitoring During Spinal Procedures-Case Reports"</i>	Orlando, FL, USA
Feb 2018	ASNM Annual Meeting American Society of Neurophysiological Monitoring Panelist: <i>Pediatric Neurosurgical Procedures (Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNMM, George Jallo, MD, Veronica Busso, MD, Anthony Sestokas, Ph.D., D.ABNM, FASNMM)</i>	Orlando, FL, USA
Feb 2018	ASNM Annual Meeting American Society of Neurophysiological Monitoring Panelist: <i>Cortical Mapping (Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNMM, Mathew Eccher, MD, MS, FAAN, FACNS, Christopher Pace, Ph.D., CNIM)</i>	Orlando, FL, USA
Feb 2018	ASNM Annual Meeting American Society of Neurophysiological Monitoring Panelist: <i>Presidential Speaker Session (Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNMM, Larry Badler, MBA, LSS-BB, Aatif Hussain, MD, Joseph Moreira, MD, Brett Netherton, MS, CNIM, FASNMM, FASET, Lawrence Wierzbowski, AuD, D.ABNM, FASNMM)</i>	Orlando, FL, USA
Feb 2018	ASNM Annual Meeting American Society of Neurophysiological Monitoring Panelist: <i>Neuromonitoring During Spinal Surgeries (Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNMM, Justin Silverstein, DHSc, CNIM, Jay Shils, Ph.D.)</i>	Orlando, FL, USA
Feb 2018	ASNM Annual Meeting American Society of Neurophysiological Monitoring Panelist: <i>Optimizing IONM with Cross Collaboration (Faisal R. Jahangiri, MD, CNIM, D.ABNM, FASNMM, Alexander Razumovsky, Ph.D., FAHA, Joseph Moreira, MD, Antoun Koht, MD)</i>	Orlando, FL, USA
Dec 2017	Pre-Conference IONM Workshop Saudi Spine Society 1 st Annual Meeting <i>"IONM Alerts in Spinal Procedures: Case Reports & Data Interpretation"</i>	Riyadh, KSA
May 2017	ASNM Annual Meeting American Society of Neurophysiological Monitoring <i>"Neuromonitoring during Minimal Invasive Spine Surgeries"</i>	Cleveland, OH, USA

Apr 2017	Neuro Alert – Webinar <i>Train of Four (TOF): Are We Doing It The Right Way?</i>	White Plains, NY, USA
Mar 2017	SANS IONM Spine Workshop <i>“IONM for Neurosurgical Procedures”</i>	Riyadh, KSA
Dec 2016	12 th Saudi Anesthesia Society (SAS) International Anesthesia Conference <i>“Role of IONM for Enhanced Recovery After Anesthesia (ERAA)”</i>	Riyadh, KSA
May 2016	ASNM Annual Meeting American Society of Neurophysiological Monitoring <i>“Neuromonitoring during Spine Instrumentation Surgeries”</i>	Chicago, IL, USA
Mar 2016	POA Spine Forum: Second International IONM Workshop Basic Intraoperative Neurophysiological Monitoring (IONM) Hands-on Workshop for Spine Surgeons	Rawalpindi, Pakistan
Feb-Mar 2016	Pre-Conference IONM Workshop SANS 10 th Annual Meeting <i>“IONM for Neurosurgical Procedures”</i>	Riyadh, KSA
Feb-Mar 2016	Pre-Conference IONM Workshop SANS 10 th Annual Meeting <i>“Anesthesia for Neurosurgical Procedures”</i>	Riyadh, KSA
Nov 2015	9 th APCSS and 1 st ASA Conjoint Meeting Asia Pacific Cervical Spine Society (APCSS) & 1 st Arab Spine Academy (ASA) Meeting <i>Intraoperative Neurophysiological Monitoring (IONM) in Spinal Cord Tumor Surgery</i>	Dubai, UAE
Oct 2015	SSET & TNS Joint Annual Meeting Southern Society of Neurophysiological Monitoring (SSET) & Texas Neurodiag Society <i>Multimodality neurophysiological monitoring during Tibial / Fibular osteotomies for preventing peripheral nerve injuries</i>	Dallas, TX, USA
Oct 2015	SSET & TNS Joint Annual Meeting Southern Society of Neurophysiological Monitoring (SSET) & Texas Neurodiag Society <i>IONM and Interesting Cases</i>	Dallas, TX, USA
Aug 2015	SpecialtyCare – Webinar <i>Train of Four (TOF): Are We Doing It The Right Way?</i>	Roanoke, VA, USA
July 2015	SpecialtyCare – Webinar <i>IONM during DLIF/XLIF Procedures</i>	Roanoke, VA, USA
May 2015	Inomed IONM User Meeting Multimodal Intraoperative Neuromonitoring <i>Neurophysiological Monitoring of the spinal Sensory & Motor pathways: During the Embolization of AVM – Propofol: a safe alternative</i>	Emmendingen, Germany

May 2015	Inomed IONM User Meeting Multimodal Intraoperative Neuromonitoring <i>Interesting Cases Presentation</i>	Emmendingen, Germany
May 2015	ASNM Annual Meeting American Society of Neurophysiological Monitoring <i>"Neuromonitoring for Awake Neurosurgery"</i>	Chicago, IL, USA
May 2015	ASNM Annual Meeting American Society of Neurophysiological Monitoring <i>"Crossing the Hurdle to Take the Baseline: Troubleshooting Tips for Technologists & Readers"</i>	Chicago, IL, USA
Mar 2015	POA Spine Forum: First International IONM Workshop Basic Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons <i>Introduction to IONM for Spine Surgeons</i>	Rawalpindi, Pakistan
Mar 2015	POA Spine Forum: First International IONM Workshop Basic Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons Effects of anesthesia on Intraoperative Neurophysiological Monitoring (IONM)	Rawalpindi, Pakistan
Mar 2015	POA Spine Forum: First International IONM Workshop Basic Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons <i>Setting a New IONM Program in your Spine Center</i>	Rawalpindi, Pakistan
Mar 2015	SANS: Saudi Association of Neurological Surgeons <i>Intraoperative Neurophysiological Monitoring Workshop</i>	Riyadh, KSA
Dec 2014	Spine Update 2014 Conference <i>Intraoperative Neurophysiological Monitoring Workshop</i>	Riyadh, KSA
Dec 2014	Spine Update 2014 Conference <i>"Intraoperative Neurophysiological Monitoring during Scoliosis surgeries: A luxury or Necessity?"</i>	Riyadh, KSA
Nov 2014	4 th Annual Saudi Epilepsy Society Conference 1 st Saudi International Stereotactic & Functional Neurosurgery Conference (SES-SFN) Clinical Neurophysiology Workshop II <i>"Awake Craniotomies and Mapping of Cortical Language Areas"</i>	Riyadh, KSA
Oct 2014	Inomed Scientific Workshop <i>Introduction to Intraoperative Neurophysiological Monitoring (IONM)</i>	Istanbul, Turkey
May 2014	ASNM 25 th Annual Meeting American Society of Neurophysiological Monitoring <i>"Brachial Plexus Mapping"</i>	Chicago, IL, USA
Nov 2013	Safe Passage Neuromonitoring Webinar <i>Neurophysiological Monitoring</i>	New York, NY, USA
Nov 2013	21 st Saudi Neurology Society Annual Meeting: IONM Workshop	Riyadh, KSA

Neurophysiological Monitoring during Vascular Surgeries

- May 2013 ASNM 24th Annual Meeting Boston, MA, USA
American Society of Neurophysiological Monitoring
"Intraoperative Neurophysiological Monitoring during High-Risk Skull Base Surgeries"
- Mar 2013 2nd Saudi International Conference on Intra Operative Neurophysiology Riyadh, KSA
Tufts School of Medicine & King Fahad Medical City,
"Preventing Cranial Nerve Injuries during High-Risk Brain Surgeries"
- Mar 2013 2nd Saudi International Conference on Intra Operative Neurophysiology Riyadh, KSA
Tufts School of Medicine & King Fahad Medical City,
"Neurophysiologic Monitoring during Spine Surgeries: A luxury or Necessity?"
- Feb 2013 APPNA MERIT, Riyadh, KSA / Pakistan
Medical Education & Research International Training & Transfer of Technology initiative:
Live Webinar Video Lecture: Faculty & Post-graduates of Multiple Medical Institutes in
Pakistan:
*"Cranial Nerve Monitoring: Preventing Facial Nerve injuries & Hearing Preservation during
high-risk brain surgeries."* Live Video Presentation.
- Sept 2012 IONM Course: 52nd Annual Conference Orlando, FL, USA
Southern Society of Electroneurodiagnostic Technologists (SSET)
"Cortical Sensory & Motor Mapping: Dual Radial versus Tangential Radial Model"
- Sep 2012 APPNA MERIT, Riyadh, KSA / Pakistan
Medical Education & Research International Training & Transfer of Technology initiative:
Live Webinar Video Lecture: Faculty & Post-graduates of Multiple Medical Institutes in
Pakistan:
"Neurophysiological Monitoring: A Luxury or Necessity." Live Video Presentation.
- May 2012 ASNM 23rd Annual Meeting Salt Lake City, UT, USA
American Society of Neurophysiological Monitoring
Breakfast with Experts: "Cortical Sensory & Motor Mapping"
- Feb 2012 King Abdulaziz Medical City, National Guard Health Affairs Riyadh, KSA
King Saud Bin Abdulaziz University for Health Sciences & Postgraduate Training Center
"Neurosciences Critical Care" Course & Workshop
- Oct 2011 King Abdulaziz Medical City, National Guard Health Affairs Riyadh, KSA
King Saud Bin Abdulaziz University for Health Sciences & Postgraduate Training Center
"Traumatic Brain Injury (TBI)"
- Oct 2011 King Abdulaziz Medical City, National Guard Health Affairs Riyadh, KSA
King Saud Bin Abdulaziz University for Health Sciences & Postgraduate Training Center
"Neurosciences Critical Care" Course & Workshop
- May 2011 ASNM 22nd Annual Meeting. Orlando, FL, USA
Panel Co-Chair. American Society of Neurophysiological Monitoring
"Monitoring in Underdeveloped Countries"

- April 2011 APPNA MERIT, Charlottesville, VA, USA / Pakistan
Medical Education & Research International Training & Transfer of Technology initiative:
 Live Webinar Video Lecture: Faculty & Post-graduates of Multiple Medical Institutes in Pakistan: *“Surgical Neurophysiology: Selective Dorsal Root Rhizotomy (SDR) for the treatment of Spasticity.”* Live Video Presentation.
- Oct 2010 APPNA MERIT, Charlottesville, VA, USA / Pakistan
Medical Education & Research International Training & Transfer of Technology initiative:
 Live Webinar Video Lecture: Faculty & Post-graduates of Multiple Medical Institutes in Pakistan:
“Anesthesia & Surgical Neurophysiology: Effect of Anesthesia on Intra Operative Neurophysiological Monitoring (IONM)”
- Oct 2010 SSET IONM Course: 50th Annual Conference Myrtle Beach, SC, USA
 Southern Society of Electroneurodiagnostic Technologists (SSET)
“Neurophysiological Monitoring during Selective Dorsal Root Rhizotomy surgery.”
- Aug 2010 APPNA MERIT, Charlottesville, VA, USA / Pakistan
Medical Education & Research International Training & Transfer of Technology initiative:
 Live Webinar Video Lecture: Faculty & Post-graduates of Multiple Medical Institutes in Pakistan: *“Surgical Neurophysiology: An Introduction to Intra Operative Neurophysiological Monitoring (IONM)”*
- Aug 2010 ASET, 51st Anniversary Annual Conference Louisville, KY, USA
 American Society of Electroneurodiagnostic Technologists (ASET)
“Neurophysiological Monitoring during Selective Dorsal Root Rhizotomy surgery.”
- Aug 2009 ASET, 50th Anniversary Annual Conference Phoenix, AZ, USA
 American Society of Electroneurodiagnostic Technologists (ASET)
“Multimodality Neurophysiological monitoring in Spine Surgeries.”
- April 2009 ASNM 20th Annual Meeting Vancouver, Canada
 American Society of Neurophysiological Monitoring
“Protecting the Auditory Pathways in High-Risk Surgeries”
- Oct 2008 SSET IONM Course Raleigh, NC, USA
 Southern Society of Electroneurodiagnostic Technologists (SSET)
“Cranial Nerve Monitoring in High-Risk Surgeries”
- July 2008 Rehman Medical Institute (RMI) Peshawar, Pakistan
“Advances in Surgeries: Intra Operative Neurophysiological Monitoring in High-Risk Surgeries”
- July 2008 SHIFA International Hospital & School of Medicine, Islamabad, Pakistan
“Advances in Surgeries: Intra Operative Neurophysiological Monitoring in High Risk Surgeries”
- July 2008 Combined Military Hospital (CMH) Rawalpindi, Pakistan
“Advances in Surgeries: Intra Operative Neurophysiological Monitoring in High-Risk Surgeries”

- June 2008 Post Graduate Medical Institute, Peshawar, Pakistan
Khyber Medical University,
"Advances in Surgeries: Intra Operative Neurophysiological Monitoring in High Risk Surgeries"
- June 2008 Ayub Medical Complex Abbottabad, Pakistan
"Advances in Surgeries: Intra Operative Neurophysiological Monitoring in High Risk Surgeries"
- June 2008 Pakistan Institute of Medical Sciences (PIMS) Islamabad, Pakistan
"Advances in Surgeries: Intra Operative Neurophysiological Monitoring in High Risk Surgeries"
- Dec 2004 APPNA Winter Meeting Khyber Medical College, Peshawar, Pakistan
Association of Physicians of Pakistani Descent in North America
"Intraoperative Neurophysiologic Monitoring in High Risk Surgeries"

Research Paper & Poster Presentations:

- Jul 2021 E-Poster Presentation Paris, France
World Congress on Neurorehabilitation 2021
"Events and Alerts Identified by IONM in 2,599 Lumbar Surgeries."
- Jun 2021 E-Poster Presentation Virtual, Finland
American Clinical Neurophysiology Society (ACNS) Annual Meeting
"Adjuncting Linked Quadri-Polar (LQP) and Preconditioning Stimulation Technique to Improve TCE-MEPs During Spinal Tumor Resection. A Case Report"
- Jun 2021 E-Poster Presentation Virtual, Finland
American Clinical Neurophysiology Society (ACNS) Annual Meeting
"Optimizing TCEMEP Stimulation For Intraoperative Neurophysiological Monitoring (IONM) In Pediatric Patients. A Case Report."
- May 2021 E-Poster Presentation Virtual, USA
American Society of Neurophysiological Monitoring (ASNM) 30th Annual Meeting
"Events and Alerts Identified by IONM in 2,599 Lumbar Surgeries."
- May 2021 E-Poster Presentation Virtual, USA
American Society of Neurophysiological Monitoring (ASNM) 30th Annual Meeting
"Motor Evoked Potentials (MEP) Alerts in Extradural Lumbar Surgeries."
- May 2021 E-Poster Presentation Virtual, USA
American Society of Neurophysiological Monitoring (ASNM) 30th Annual Meeting
"Distal Saphenous Somatosensory Evoked Potentials loss and Recovery in Open Anterior Hip Surgery."
- May 2021 E-Poster Presentation Virtual, USA
American Society of Neurophysiological Monitoring (ASNM) 30th Annual Meeting

"Pediatric Intraoperative Neuromonitoring: Optimizing Transcranial electrical Motor Evoked Potentials (TCeMEP) stimulation parameters to improve monitoring reliability."

- Feb 2021 E-Poster Presentation Virtual, USA
American Clinical Neurophysiology Society (ACNS) Annual Meeting
"Protecting the Visual Pathways During Optic Nerve Surgery Using Intraoperative Visual Evoked Potentials (VEP)"
- Feb 2021 E-Poster Presentation Virtual, USA
American Clinical Neurophysiology Society (ACNS) Annual Meeting
"Multimodality Intraoperative Neurophysiological Monitoring (IONM) During Shoulder Surgeries
- Feb 2021 E-Poster Presentation Virtual, USA
American Clinical Neurophysiology Society (ACNS) Annual Meeting
"Intraoperative Triggered Electromyography Recordings from the External Urethral Sphincter Muscles During Spine Surgeries"
- Feb 2021 E-Poster Presentation Virtual, USA
American Clinical Neurophysiology Society (ACNS) Annual Meeting
"Adjuncting Linked Quadri-Polar (LQP) and Preconditioning Stimulation Technique to Improve TCE-MEPs During Spinal Tumor Resection. A Case Report"
- Feb 2021 E-Poster Presentation Virtual, USA
American Clinical Neurophysiology Society (ACNS) Annual Meeting
"Optimizing TCeMEP Stimulation For Intraoperative Neurophysiological Monitoring (IONM) In Pediatric Patients. A Case Report."
- May 2019 Oral & Poster Presentation, ASNM Annual Meeting Chicago, IL
"Triggered Electromyogram Recordings from Urethral Sphincter Muscles"
- Apr 2019 Poster Presentation, Atlantic Health Overlook NeuroConference Summit, NJ
"Triggered Electromyogram Recordings from Urethral Sphincter Muscles"
- Apr 2019 Poster Presentation, Atlantic Health Overlook NeuroConference Summit, NJ
"Utilizing longer intramuscular needle pair electrodes: What are we really missing in our Intraoperative Muscle Recordings?"
- Aug 2018 Oral & Poster Presentation, ASET Annual Meeting New Orleans, LA, USA
American Neurodiagnostic Society
"Motor Evoked Potentials (MEP) Recordings from Urethral Sphincter Muscles (USMEP)"
- Aug 2018 Oral & Poster Presentation, ASET Annual Meeting New Orleans, LA, USA
American Neurodiagnostic Society
"Incidence of IONM Data Changes Due to Positioning in 4577 Surgeries"
- Aug 2018 Oral & Poster Presentation, ASET Annual Meeting New Orleans, LA, USA
American Neurodiagnostic Society
"IONM During Hip Arthroscopic Repair Surgeries"

- July 2018 Poster Presentation, APPNA 41st Annual Meeting Dallas, TX, USA
 Association of Physicians of Pakistani Descent North America
 “Language Mapping During Awake Brain Surgeries”
- July 2018 Poster Presentation, APPNA 41st Annual Meeting Dallas, TX, USA
 Association of Physicians of Pakistani Descent North America
 “Recent Advances in Neuroscience: Surgical Neurophysiology for Improvement in Post-Operative Patient’s Outcome”
- Feb 2018 Oral & Poster Presentation, ASNM Annual Meeting Orlando, FL, USA
 American Society of Neurophysiological Monitoring
 “Motor Evoked Potentials (MEP) Recordings from Urethral Electrodes”
- Feb 2018 Oral & Poster Presentation, ASNM Annual Meeting Orlando, FL, USA
 American Society of Neurophysiological Monitoring
 “Incidence of IONM Data Changes Due to Positioning in 4577 Surgeries”
- Feb 2018 Oral & Poster Presentation, ASNM Annual Meeting Orlando, FL, USA
 American Society of Neurophysiological Monitoring
 “IONM During Hip Arthroscopic Repair Surgeries”
- May 2017 Oral & Poster Presentation, ASNM Annual Meeting Cleveland, OH, USA
 American Society of Neurophysiological Monitoring
 “Benefit of Intraoperative Neurophysiological Monitoring (IONM) in a Pediatric Patient With Spinal Dysmorphysim, Split Cord and Scoliosis”
- Apr 2017 Oral Presentation, Riyadh, KSA
 The Health Profession Conference 2017
 “Benefit of Intraoperative Neurophysiological Monitoring (IONM) in a Pediatric Patient With Spinal Dysmorphysim, Split Cord and Scoliosis”
Presenter: Monerah Annaim (Medical Student)
- Apr 2017 Oral Presentation, Riyadh, KSA
 SANS 2017 Annual Meeting
 “Benefit of Intraoperative Neurophysiological Monitoring (IONM) in a Pediatric Patient With Spinal Dysmorphysim, Split Cord and Scoliosis”
Presenter: Abdulrahman M. Alrajhi (Medical Student)
- Sep 2016 Oral Presentation, Riyadh, KSA
 Pediatric Orthopedic Update Conference & Workshop
 King Saud Bin Abdulaziz University for Health Sciences (KSAU-HS)
 “A Vertebral Column Resection (VCR) for Kyphoscoliosis: An Intraoperative Neurophysiological Monitoring (IONM) Alert”
Presenter: Monerah Annaim (Medical Student)
- Aug 2016 Oral Presentation, ASET Annual Meeting Pittsburg, PA, USA
 American Neurodiagnostic Society (ASET)
 “Vertebral Column Resection (VCR) for Kyphoscoliosis in a Patient with Ehlers-Danlos Syndrome (EDS): An Intraoperative Neurophysiological Monitoring (IONM) Alert”

- May 2016 Oral & Poster Presentation, ASNM Annual Meeting Chicago, IL, USA
American Society of Neurophysiological Monitoring
"A Vertebral Column Resection (VCR) for Kyphoscoliosis: An Intraoperative Neurophysiological Monitoring (IONM) Alert"
- Jul 2015 Oral Presentation, ASET Annual Meeting Weston, FL, USA
American Society of Neurophysiological Monitoring
"Utilizing longer intramuscular needle pair electrodes: What are we really missing in our Intraoperative Muscle Recordings?"
- May 2015 Oral & Poster Presentation, ASNM Annual Meeting Chicago, IL, USA
American Society of Neurophysiological Monitoring
"Utilizing longer intramuscular needle pair electrodes: What are we really missing in our Intraoperative Muscle Recordings?"
- Oct 2014 Oral Presentation, ISIN Annual Meeting Istanbul, Turkey
International Society of Intraoperative Neurophysiological Monitoring (ISIN)
"Continuous Intraoperative Neurophysiological Monitoring (IONM) For Early Detection of Pedicle Screw related Spinal Cord Injury." Presenter: Dr. Bernie Cohen
- Aug 2014 Oral Presentation, ASET & SSET Annual Meeting Asheville, NC, USA
The Neurodiagnostic Society (ASET) & Co-sponsored by the Southern Society of Electroneurodiagnostic Technologists (SSET)
"Early Detection of Pedicle Screw Related Spinal Cord Injury by Intraoperative Neurophysiological Monitoring (IONM)"
- May 2014 Poster Presentation, ASNM Annual Meeting Chicago, IL, USA
American Society of Neurophysiological Monitoring
"Early Detection of Pedicle Screw Related Spinal Cord Injury by Intraoperative Neurophysiological Monitoring (IONM)"
- May 2014 Poster Presentation, ASNM Annual Meeting Chicago, IL, USA
American Society of Neurophysiological Monitoring
"Intraoperative Neurophysiological Monitoring (IONM) During Sacrectomy Procedures"
Presenter: Dr. Anila F. Jahangiri (KAIMRC)
- April 2014 Poster Presentation, NEBEC 2014 Boston, MA, USA
40th Annual Northeast Bioengineering Conference
"Anterior-Posterior Resection of Sacral Tumor with Computer Navigation System"
Presenter: Dr. Anila F. Jahangiri (KAIMRC)
- Dec 2013 Poster Presentation, 16th Resident's Day: Riyadh, Saudi Arabia
King Abdulaziz Medical City, King Saud bin Abdulaziz University for Health Sciences, National Guard Health Affairs
"Localization of Cortical Language Areas by Direct Cortical Motor Stimulation (DECS) and Electrocorticography (ECoG)"
- May 2013 Poster Presentation, 14th Research Day: Riyadh, Saudi Arabia

Department of Medicine, King Abdulaziz Medical City, King Saud bin Abdulaziz University for Health Sciences, National Guard Health Affairs
"Multimodality Neurophysiological Monitoring in Tibial/Fibular Osteotomies for preventing Peripheral Nerve Injuries."

- May 2013 Poster Presentation, 14th Research Day: Riyadh, Saudi Arabia
Department of Medicine, King Abdulaziz Medical City, King Saud bin Abdulaziz University for Health Sciences, National Guard Health Affairs
"Neurophysiologic Monitoring during Spine Surgeries: A luxury or Necessity?"
- Dec 2012 Oral Presentation, 15th Resident's Day (1st Prize) NGH, Riyadh, KSA
King Saud Bin Abdulaziz University for Health Sciences,
"Establishing new normal Visual Evoked Potential (VEP) values in young Saudi male population" Presenter: Dr. Ahmed Abulaban
- Sept 2012 Oral Presentation, SSET Annual Meeting Orlando, FL, USA
Southern Society of Neurophysiological Monitoring
"Preventing lower cranial nerve injuries during fourth ventricle tumor resection by utilizing neurophysiological monitoring" Co-presenter: Dr. Mazhar Minhas
- Sep 2012 Oral Presentation, SSET Annual Meeting Orlando, FL, USA
Southern Society of Neurophysiological Monitoring
"Establishing new normal Visual Evoked Potential (VEP) values in young Saudi male population" Co-presenter: Dr. Ahmed Abulaban
- Sep 2012 Oral Presentation, SSET Annual Meeting Orlando, FL, USA
Southern Society of Neurophysiological Monitoring
"Position related injuries during non-spinal cases: A Sacrectomy case report."
Co-presenter: Dr. Muhannud Mjurkesh
- May 2012 Poster Presentation, 13th Research Day: Riyadh, Saudi Arabia
Department of Medicine, King Abdulaziz Medical City, King Saud bin Abdulaziz University for Health Sciences, National Guard Health Affairs
"Localization of Central Sulcus by Cortical Sensory Mapping, Direct Cortical Motor Stimulation and Electroencephalography"
- May 2012 Poster Presentation, 13th Research Day: Riyadh, Saudi Arabia
Department of Medicine, King Abdulaziz Medical City, King Saud bin Abdulaziz University for Health Sciences, National Guard Health Affairs
"Protecting the Visual Pathways during Optic Nerve Surgery Using Neurophysiological Monitoring"
- May 2012 Oral Presentation, Saudi Physical Therapy Conference Riyadh, Saudi Arabia
King Abdulaziz Medical City, King Saud bin Abdulaziz University for Health Sciences, National Guard Health Affairs
"Multimodality Neurophysiological Monitoring in Tibial/Fibular Osteotomies for preventing Peripheral Nerve Injuries."
- May 2012 Oral Presentation, ASN Annual Meeting Salt Lake City, UT, USA
American Society of Neurophysiological Monitoring

“Preventing lower cranial nerve injuries during the fourth ventricle tumor resection by utilizing neurophysiological monitoring.”

- Apr 2012 Oral Presentation, 6th SANS Annual Meeting: Alkhobar, Saudi Arabia
Horizons of Neurosurgery V
Saudi Association of Neurological Surgeons
“Protecting the Spinal Cord Sensory and Motor Functions during Cordotomy Procedures”
- Apr 2012 Poster Presentation, 6th SANS Annual Meeting: Alkhobar, Saudi Arabia
Horizons of Neurosurgery V: Saudi Association of Neurological Surgeons
“Localization of Central Sulcus by Cortical Sensory Mapping, Direct Cortical Motor Stimulation and Electrocorticography”
- Apr 2012 Poster Presentation, 6th SANS Annual Meeting: Alkhobar, Saudi Arabia
Horizons of Neurosurgery V: Saudi Association of Neurological Surgeons
“Preventing the Visual Pathways during Optic Nerve Surgery Using Neurophysiological Monitoring”
- Aug 2011 Podium Presentation, ASET 2011 Annual Conference Atlanta, GA, USA
The Neurodiagnostic Society (ASET) & Co-sponsored by the Southern Society of Electroneurodiagnostic Technologists (SSET)
“Localization of the Primary Motor Cortex by using a Tangential-Radial Cortical SSEP Model, DECS, and Electrocoicography”
- Aug 2011 Poster Presentation, ASET 2011 Annual Conference Atlanta, GA, USA
The Neurodiagnostic Society (ASET) & Co-sponsored by the Southern Society of Electroneurodiagnostic Technologists (SSET)
“Protecting the Spinal Cord Sensory and Motor Functions during Cordotomy Procedures”
- May 2011 ASNM 22nd Annual Meeting Orlando, FL, USA
American Society of Neurophysiological Monitoring (ASNM)
Neuromonitoring in Underdeveloped Countries”
- May 2011 ASNM 22nd Annual Meeting Orlando, FL, USA
American Society of Neurophysiological Monitoring (ASNM)
“Limiting the current density during Localization of the Primary Motor Cortex by using a Tangential-Radial Cortical SSEP Model, DECS and Electrocoicography.”
- May 2011 ASNM 22nd Annual Meeting Orlando, FL, USA
American Society of Neurophysiological Monitoring (ASNM)
“Protecting the Spinal Cord Sensory and Motor functions during Cordotomy Procedures.”
- May 2011 ASNM 22nd Annual Meeting Orlando, FL, USA
American Society of Neurophysiological Monitoring (ASNM)
“Intraoperative Neuromonitoring: Lessons learned from 32 case events in 2095 spine cases.”
- April 2011 Poster Presentation: 10th Annual Resident Research Day Charlottesville, VA, USA
Department of Surgery, University of Virginia Health System

“Localization of the Primary Motor Cortex by Using a Tangential-Radial Cortical SSEP Model, DECS and Electrocorticography”

- April 2011 Poster Presentation: 10th Annual Resident Research Day Charlottesville, VA, USA
Department of Surgery, University of Virginia Health System
“Preventing possible position-related brachial plexus injury with intraoperative Somatosensory Evoked Potentials (SSEP) and Trans-Cranial electrical Motor Evoked Potentials (TCeMEP Monitoring)”
- Oct 2010 Congress of Neurological Surgeons (CNS) San Francisco, CA, USA
Poster Presentation: Presenter: Jonathan H. Sherman, MD
“Limiting the current density during Localization of the Primary Motor Cortex by using a Tangential-Radial Cortical SSEP Model, DECS and Electrococtography.”
- Sept 2010 EuroSpine 2010 Annual Meeting Vienna, Austria
Paper Presentation: Dr. Vincent Arlet
“Intraoperative Neuromonitoring: Lessons learned from 32 case events in 2095 spine cases”
- Aug 2010 Poster Presentation, 51st Anniversary Annual Conference Louisville, KY, USA
American Society of Electroneurodiagnostic Technologists (ASET)
“Protecting the Sensory and Motor Spinal Pathways during the Embolization of Spinal AVM in INR Suite”
- Aug 2010 Poster Presentation, 51st Anniversary Annual Conference Louisville, KY, USA
American Society of Electroneurodiagnostic Technologists (ASET)
“Protecting the Genitofemoral Nerve during Direct Lateral Interbody Fusion (DLIF/XLIF) Procedures”
- April 2010 ASNM Annual Meeting: Research Paper Nashville, TN, USA
American Society of Neurophysiological Monitoring (ASNM)
“Protecting the Genitofemoral Nerve during Direct Lateral Interbody Fusion (DLIF/XLIF) Procedures”
- April 2010 AO Spine North America Banff Springs, Alberta, Canada
8th Annual AO Spine North America Fellows Forum
Paper Presentation: Presenter: Mathew Eager, MD
“Intraoperative Neuromonitoring: Lessons learned from 32 case events in 2095 spine cases”
- April 2010 AO Spine North America Banff Springs, Alberta, Canada
8th Annual AO Spine North America Fellows Forum
Poster Presentations: Presenter: Mathew Eager, MD
“Intraoperative neuromonitoring: Lessons learned from 32 case events in 2095 spine cases”
- Aug 2009 Poster Presentation, 50th Anniversary Annual Conference Phoenix, AZ, USA
American Society of Electroneurodiagnostic Technologists (ASET)
“Use of Intraoperative Neurophysiological Monitoring during Selective Dorsal Root Rhizotomies for treatment of Spasticity in a patient with Cerebral Palsy.”

Aug 2009	Poster Presentation, 50 th Anniversary Annual Conference American Society of Electroneurodiagnostic Technologists (ASET) <i>"Predicting surgical outcome by Somatosensory Evoked Potentials and Trans-Cranial Electric Motor Evoked Potentials in a Cervical-Medullary Junction Hemangioblastoma."</i>	Phoenix, AZ, USA
Nov 2008	Platform Presentation, 2 nd National Neurology Day SHIFA International Hospital & School of Medicine, (1 st prize) <i>"Intra Operative Neurophysiological Monitoring: Luxury or Necessity?"</i>	Islamabad, Pakistan
May 2008	ASNM 19 th Annual Meeting: Research Paper American Society of Neurophysiological Monitoring (ASNM) <i>"Multimodality Neurophysiological Monitoring in Tibial/Fibular Osteotomies for preventing Peripheral Nerve Injuries."</i>	Chicago, IL, USA
May 2007	ASNM 18 th Annual Meeting American Society of Neurophysiological Monitoring Moderator Scientific Session	Chicago, IL, USA
May 2006	ASNM 17 th Annual Meeting: Research Paper American Society of Neurophysiological Monitoring <i>"Use of Intraoperative Monitoring during Selective Dorsal Root Rhizotomies for treatment of Severe Thoracic Pain (Post Herpetic Neuralgia)"</i>	Seattle, WA, USA
May 2005	16 th Annual Meeting: Research Paper American Society of Neurophysiological Monitoring <i>"Tangential-Radial Cortical SSEP Model, DECS and ECoG Localization in Posterior Fossa Frontal Metastatic Adenocarcinoma"</i>	Philadelphia, PA, USA
Feb 1992	XI International Biennial Pediatric Conference Pakistan Paediatric Association <i>"Prevalence of Upper Respiratory Tract Infections in children under five years of age in rural areas of Peshawar, Pakistan."</i>	Karachi, Pakistan

Conference Participation (Continuing Medical Education):

2022	Feb	ASNM WinterTownhall Meeting	Online, USA
2021	Sep	ASNM Fall Symposium	Virtual, USA
	Aug	ASET Annual Meeting	Online, USA
	Jul	World Congress on Neurorehabilitation	Virtual, Paris, France
	May	ASNM 30 th Annual Virtual Meeting	Virtual, USA
	Mar	SANS- Brain IONM Workshop	Virtual, KSA
	Feb	ASNM Winter Virtual Symposium	Virtual, USA
	Feb	American Clinical Neurophysiology Society (ACNS) Annual Meeting	Virtual, USA
2020	Jan	Axis Neuromonitoring Annual Winter Workshop & Symposium	Virtual, TX, USA
	Dec	Comprehensive EEG Course	Virtual, Riyadh, KSA
	Nov	SSET Annual Meeting	Online, USA
	Nov	IONM Workshop, Saudi Spine Society 4 th Annual Meeting	Virtual, Riyadh, KSA

	Sep	ASNM Fall Symposium	Online, USA
	Aug	ASET Annual Meeting	Online, USA
	May	ASNM MEP Townhall Meeting	Online, USA
	May	Biostatistics Research Training Course, KFSH Dammam, KSA	Online, USA
	Apr	California Neurodiagnostic Society Annual Meeting	Online, USA
	Feb	ASNM Winter Virtual Symposium	Chicago, IL, USA
	Jan	Axis Neuromonitoring Annual Winter Seminar & Workshops	Dallas, TX, USA
2019	Jan	Axis Neuromonitoring Annual Winter Seminar & Workshops	Dallas, TX, USA
	Feb	ASNM Winter Symposium	Westlake Village, CA, USA
	Apr	Atlantic Health Overlook NeuroConference	Summit, NJ, USA
	May	ASNM Annual Meeting	Chicago, IL, USA
	Aug	ASET Annual Meeting	Kansas City, MO, USA
	Sep	ASNM Fall Symposium	Boston, MA, USA
	Oct	TSNT Texas Neurodiagnostic Society Annual Meeting	San Antonio, TX, USA
2018	Nov	Saudi Spine Society 2 nd Annual Meeting	Jeddah, KSA
	Nov	SSET/TSNT Annual meeting	Dallas, TX, USA
	Sep	ASNM Fall Symposium	Nashville, TN, USA
	Aug	ASET 2018 Aural Meeting	New Orleans, LA, USA
	Jul	APPNA 41 st Annual Meeting	Dallas, TX, USA
	Apr	AANS 2 nd International Brain Mapping Course	New Orleans, LA, USA
	Feb	Annual Meeting of ASNM	Orlando, FL, USA
2017	Dec	Saudi Spine Society: Pre-Conference IONM Workshop	Riyadh, KSA
		Saudi Spine Society 1 st Annual Meeting	Riyadh, KSA
	Sep	ASNM Fall Symposium	Baltimore, MD, USA
	May	Annual Meeting of ASNM - 40 th Anniversary	Cleveland, OH, USA
	Mar	SANS Spine IONM Workshop	Riyadh, KSA
		Saudi Association of Neurological Surgery (SANS)	
2016	Sep	Pediatric Orthopedic Update Conference & Workshop	Riyadh, KSA
		ASNM Fall Symposium	Boston, MA, USA
	Aug	ASET Annual meeting	Pittsburgh, PA, USA
	May	27 th Annual Meeting of ASNM	Chicago, IL, USA
	Mar	POA Spine Forum: Second International IONM Workshop	Rawalpindi, Pakistan
	Feb-Mar	Saudi Association of Neurological Surgery (SANS)	Riyadh, KSA
2015	Nov	9 th APCSS and 1 st ASA Conjoint Meeting	Dubai, UAE
		<i>Asia Pacific Cervical Spine Society (APCSS) & 1st Arab Spine Academy (ASA) Meeting</i>	
	Oct	SSET Annual Meeting: Co-Sp by Texas Neurodiag Society	Dallas, TX, USA
	Jul-Aug	ASET Annual meeting	Weston, FL, USA
	May	Department of Medicine: 16 th Research Day	Riyadh, KSA
		Inomed IONM User Meeting	Emmendingen, Germany
		26 th Annual Meeting of ASNM	Chicago, IL, USA
	Mar	POA Spine Forum: First International IONM Workshop	Rawalpindi, Pakistan
		Saudi Association of Neurological Surgery (SANS)	Dammam, KSA
2014	Dec	Spine Update 2014	Riyadh, KSA
	Nov	SES-SFN Annual Meeting	Riyadh, KSA

	Oct	Inomed Scientific Workshop	Istanbul, Turkey
	Aug	ASET & SSET Joint 2014 Annual meeting	Asheville, NC, USA
	May	25 th Annual Meeting of ASNM	Chicago, IL, USA
	April	NEBEC: 40TH Annual Northeast Bioengineering Conference	Boston, MA, USA
2013	Dec	16 th Resident's Day King Saud Bin Abdulaziz University for Health Sciences	Riyadh, KSA
	Nov	21 st Saudi Neurology Society Annual Meeting: IONM Workshop	Riyadh, KSA
	May	Department of Medicine: 14 th Research Day 24 th Annual Meeting of ASNM	Riyadh, KSA Boston, MA, USA
	Mar	2 nd Saudi International Conference on IONM Tufts School of Medicine & King Fahad Medical City,	Riyadh, KSA
2012	Dec	15 th Resident's Day King Saud Bin Abdulaziz University for Health Sciences	NGHA, Riyadh, KSA
	Sep	SSET, 52 nd Annual meeting 1 st International Symposium On Intraoperative Imaging & Image-guided Neurosurgery	Orlando, FL, USA Riyadh, KSA
	May	Department of Medicine: 13th Research Day Saudi Physical Therapy Conference	Riyadh, KSA Riyadh, KSA
	Apr	Annual meeting of ASNM Saudi Association of Neurological Surgery (SANS) 6 th Annual	Salt Lake City, UT, USA Alkhobar, KSA
2011	Aug	ASET /SSET 2011 Annual meeting	Atlanta, GA, USA
	May	22 nd Annual meeting of ASNM	Orlando, FL, USA
	April	10 th Annual Resident Research Day Dept. of Surgery, University of Virginia Health System	Charlottesville, VA, USA
2010	Oct	50 th Annual meeting of SSET	Myrtle Beach, SC, USA
	Aug	51 st Annual meeting of ASET	Louisville, KY, USA
	May	21 st Annual meeting of ASNM	Nashville, TN, USA
2009	Aug	50 th Annual meeting of ASET	Phoenix, AZ, USA
	May	20 th Annual meeting of ASNM	Vancouver, Canada
2008	Oct	48 th Annual meeting of SSET	Raleigh, NC, USA
	May	19 th Annual meeting of ASNM	Chicago, IL, USA
2007	May	18 th Annual meeting of ASNM	Chicago, IL, USA
2006	July	APPNA 29 th Annual Summer Meeting	Chicago, IL, USA
	May	17 th Annual meeting of ASNM	Seattle, WA, USA
2005	Oct	Annual Meeting: Society of Neurosciences (Hiring)	Washington, DC, USA
	Aug	Neural Interfaces Workshop – National Institute of Neurological Disorders & Stroke (NINDS)	Bethesda, MD, USA
	May	16 th Annual meeting of ASNM	Philadelphia, PA, USA
2004	Dec	APPNA Winter Meeting	Khyber Medical College Peshawar, Pakistan

	Nov	Neural Interfaces Workshop – National Institute of Neurological Disorders & Stroke (NINDS)	Bethesda, MD, USA
	July	1 st Advance IONM Meeting of California	Sacramento, CA, USA
	May	15 th Annual Meeting of ASNM	San Antonio, TX, USA
2003	May	14 th Annual Meeting of ASNM	Las Vegas, NV, USA
2002	Nov	3 rd International Symposium on Intraoperative Neurophysiologic Monitoring in Neurosurgery	New York, NY, USA
	May	13 ^h Annual Meeting of ASNM	Orlando, FL, USA
2000	May	Intraoperative Monitoring Seminar, University of Michigan,	Ann Arbor, MI, USA
1997	Jul	Annual Meeting of the IEEE-EMBS	Chicago, IL, USA
1996	Jul	Annual Meeting of the Society of Neurosciences	Washington, DC, USA
1992	Feb	XI International Biannual Pediatric Conference	Karachi, Pakistan

Conference Moderator Scientific Sessions:

Feb 2022	ASNM Winter Townhall Meeting - Panelist	Virtual, USA
Jun 2021	ASNM 30 th Annual Virtual Annual Meeting	Virtual, USA
Jan 2020	Axis Neuromonitoring Annual Winter Seminar & Workshops	Richardson, TX, USA
Sep 2019	ASNM Fall Symposium	Boston, MA, USA
Jan 2019	Axis Neuromonitoring Annual Winter Seminar & Workshops	Richardson, TX, USA
Nov 2018	Saudi Spine Society: Pre-Conference IONM Workshop	Jeddah, KSA
Feb 2018	2018 Annual Meeting of ASNM	Orlando, FL, USA
Dec 2017	Saudi Spine Society: Pre-Conference IONM Workshop	Riyadh, KSA
Mar 2017	SANS Spine IONM Workshop Saudi Association of Neurological Surgery (SANS)	Riyadh, KSA
May 2016	27 th Annual Meeting of ASNM	Chicago, IL, USA
Mar 2016	POA Spine Forum: Second International IONM Workshop Hands-on IONM Workshop for Spine Surgeons	Rawalpindi, Pakistan
Feb-Mar 2016	Saudi Association of Neurological Surgery (SANS) 2016	Riyadh, KSA
Nov 2015	9 th APCSS and 1 st ASA Conjoint Meeting	Dubai, UAE

Asia Pacific Cervical Spine Society (APCSS) & 1st Arab Spine Academy (ASA) Meeting

Oct 2015	2015 SSET & TNS Joint Annual Meeting Southern Society of Neurophysiological Monitoring (SSET) & Texas Neurodiag Society	Dallas, TX, USA
May 2015	Department of Medicine: 16 th Research Day	Riyadh, KSA
Mar 2015	POA Spine Forum: First International IONM Workshop Basic Intraoperative Neurophysiological Monitoring (IONM) for Spine Surgeons	Rawalpindi, Pakistan
Mar 2015	SANS: Saudi Association of Neurological Surgeons <i>Intraoperative Neurophysiological Monitoring Workshop</i>	Riyadh, KSA
Dec 2014	Spine Update 2014 <i>Intraoperative Neurophysiological Monitoring Workshop</i>	Riyadh, KSA
May 2013	24 th Annual Meeting of ASNM	Boston, MA, USA
Mar 2013	2 nd Saudi International Conference on Intra Operative Neurophysiology Tufts School of Medicine & King Fahad Medical City,	Riyadh, KSA
Sept 2012	SSET, 52 nd Annual Meeting	Orlando, FL, USA
May 2007	18 th Annual meeting of ASNM	Chicago, IL, USA

IONM Platforms

- Cascade Surgical Studio
- Cadwell PRO / Cadwell Elite / Cadwell Cascade / IOMAX
- Medtronic NIM, NIM-Eclipse /E4
- Axon XP / Axon Epoch 2000
- Inomed ISIS
- Inomed C2
- Xltek Protektor / Xltek EP-16
- Nihon Coden
- Nicolet Viking
- Viasys Endeavor
- Leadpoint
- Bravo
- Spencer PMD 100/150
- Cadwell Quantum 84

MODALITIES (EXPERTISE):

- SSEP (Somatosensory Evoked Potentials)
- EMG (spontaneous and triggered)
- TCeMEP (Transcranial Motor Evoked Potentials)

- D-waves (Epidural responses)
- BAER (Brainstem Auditory Evoked Potentials)
- Cranial Nerves (CN II-XII)
- TCD (Transcranial Doppler)
- ECoCh (Electro Cochleograms)
- ANAP (Auditory Nerve Action Potentials)
- CNAP (Compound Nerve Action Potentials)
- EEG (Electroencephalogram)
- TSEP (Trigeminal SEP)
- PSEP (Pudendal SEP)
- Direct Spinal Cord Mapping
- Cortical SSEP Mapping
- DECS (Direct Electrical Cortical Stimulation – Bipolar/Monopolar, Short Frequency/Fast Frequency)
- Subcortical Mapping (Bipolar/Monopolar, Short Frequency/Fast Frequency)
- ECoG (Electro Corticography)
- Laryngeal Nerve Monitoring (RLN, SLN)
- VEP (Visual Evoked Potentials)
- EOG (Electro Occulography)
- ERG (Electro Retinography)
- Peripheral Compound Nerve Action Potentials (CNAP)
- Brainstem nuclei mapping
- Pudendal Nerve Monitoring
- Bulbocavernosus Reflex (BCR)
- H-Reflex

AWARDS:

May 2021	The Outstanding Publication in a Peer-Reviewed Journal Award American Society of Neurophysiological Monitoring (ASNM)	Virtual, ASNM, USA
Sep 2020	The Outstanding Committee Member Award American Society of Neurophysiological Monitoring (ASNM)	Virtual, ASNM, USA
Nov 2020	Course Director / Saudi Spine Society 4 th Annual Meeting Pre-Conference IONM Workshop	Virtual, Riyadh, KSA
Aug 2019	FASET Fellowship, ASET- <i>American Neurodiagnostic Society</i>	ASET, Kansas City, MO, USA
Nov 2018	Nominated & Elected as President Elect American Society of Neurophysiological Monitoring (ASNM)	ASNM, Chicago, IL, USA

Nov 2018	Course Director / Saudi Spine Society 2 nd Annual Meeting Pre-Conference IONM Workshop	Jeddah, KSA
Jul 2018	Excellence in Education Award APPNA MERIT	Dallas, TX, USA
Feb 2018	Nominated for President Elect American Society of Neurophysiological Monitoring (ASNM)	ASNM, Orlando, FL, USA
Feb 2018	2 nd Place Scientific Achievement Award in Orlando, FL, USA Lead Author - Research Poster, ASNM Annual Meeting <i>"Motor Evoked Potentials (MEP) Recordings from Urethral Electrodes"</i>	
Dec 2017	Course Director / Saudi Spine Society 1 st Annual Meeting Pre-Conference IONM Workshop	Riyadh, KSA
Apr 2017	<u>3rd Prize</u> Oral Presentation, the Health Profession Conference 2017 <i>"Benefit of Intraoperative Neurophysiological Monitoring (IONM) in a Pediatric Patient With Spinal Dysmorphism, Split Cord and Scoliosis"</i> <i>Presenter: Monerah Annaim (Medical Student)</i>	Riyadh, KSA
May 2016	Founding Member, Research Committee Saudi Spine Society (SSS)	Riyadh, KSA
Mar 2016	PPQP Invited by the Government of Pakistan to introduce Intra Operative Neurophysiological Monitoring (IONM) in various cities in Pakistan. Invited Under: Presidents Programme for the Care Of Highly Qualified Overseas Pakistanis (PPQP), Ministry of Federal Education and Professional Training, Islamabad, Pakistan.	Islamabad, Pakistan
Mar 2016	Chairman (Shield of Honor) Second, International Hands-on IONM Workshop for Spine Surgeons	Rawalpindi, Pakistan
Feb-Mar 2016	IONM Course Director / SANS 10 th Annual Meeting Pre-Conference IONM Workshop	Riyadh, KSA
Nov 2015	Elected, Board Member-at-Large (Term 2016-20) American Society of Neurophysiological Monitoring	ASNM, Chicago, IL, USA
Oct 2015	IONM Co-Course Director, SSET-TxSET Joint Annual Meeting Southern Society of Electroneurodiagnostic Technologists (SSET)	Dallas, TX, USA
May 2015	Scientific Achievement Award Lead Author - Research Poster, ASNM Annual Meeting <i>"Utilizing Longer Intramuscular Needle Pair Electrodes: What are we really missing?"</i>	Chicago, IL, USA
Mar 2015	IONM Co-Course Director (Shield of Honor) First, International IONM Workshop for Spine Surgeons	Rawalpindi, Pakistan

Mar 2015	IONM Course Director / SANS 9 th Annual Meeting Pre-Conference IONM Workshop – Horizons of Neurosurgery VII	Dammam, KSA
Dec 2014	IONM Course Director Pre-Conference IONM Workshop – Spine Update 2014 Annual Meeting	Riyadh, KSA
May 2014	Member, Education Committee American Society of Neurophysiological Monitoring	ASNM, Chicago, IL, USA
May 2014	Member, Guidelines & Standard of Care Committee American Society of Neurophysiological Monitoring	ASNM, Chicago, IL, USA
May 2014	Member, Research Committee American Society of Neurophysiological Monitoring	ASNM, Chicago, IL, USA
2013-19	Chair, Membership Committee American Society of Neurophysiological Monitoring	ASNM, Chicago, IL, USA
Sep 2013	Member Board of Trustees (2013-15), Southern Society of Electroneurodiagnostic Technologists (SSET)	SSET, USA
Sep 2013	IONM Course Director / Organizer, 53 rd Annual Meeting Southern Society of Electroneurodiagnostic Technologists (SSET)	Savannah, GA USA
Aug 2013	Chair, Website Committee Southern Society of Electroneurodiagnostic Technologists (SSET)	SSET, USA
May 2013	FASNM Fellowship, American Society of Neurophysiological Monitoring	ASNM, Chicago, IL, USA
Dec 2012	<u>First Prize:</u> Oral Presentation, 15 th Annual Resident's Day King Saud Bin Abdulaziz University for Health Sciences, <i>"Establishment of Normal Visual Evoked Potentials (VEP) Values in Adult Saudi Males"</i>	NGHA, Riyadh, KSA
Sep 2012	IONM Course Director, 52 nd Annual Meeting Southern Society of Electroneurodiagnostic Technologists (SSET)	Orlando, FL USA
Jan 12-14	Member, Membership Committee	ASNM, Chicago, IL, USA
Aug 2011	Member Board of Trustees (2011-13), Southern Society of Electroneurodiagnostic Technologists (SSET)	SSET, USA
Jan 11-14	Member, Applied Philanthropic Committee	ASNM, Chicago, IL, USA
Nov 2008	<u>First Prize:</u>	Islamabad, Pakistan

Platform Presentation, 2nd National Neurology Day
 SHIFA International Hospital & School of Medicine,
"Intra Operative Neurophysiological Monitoring: Luxury or Necessity?"

- Jun -July 2008 Islamabad, Pakistan
 Invited by the Government of Pakistan to introduce the field of Intra Operative Neurophysiological Monitoring (IONM) in various cities in Pakistan.
Under the program: National Talent Pool "Visits of Expatriate Pakistani Consultants for Short Duration Assignments in Pakistan (VEPCON)"
- Sep 2003 Cockeysville, MD, USA
 Achievement Award of Excellence
 Sentient Medical Systems
- Sep 1990 Peshawar, Pakistan
 Chief Organizer, Gold Medal
 By Governor of NWFP: Fund Raising drive for "Peshawar Mental Health Association."
- April 1988 Peshawar, Pakistan
 Volunteer of the year Award
 By Chief Minister of NWFP
 Fatimid Foundation: Hemophilia / Thalassemia Blood Services.

JOURNAL REVIEWER:

- 2021 USA
 Associate Editor,
 The Neurodiagnostic Journal (Official Journal of ASET – Neurodiagnostic Society)
- 2015-21 USA
 Assistant Editor,
 The Neurodiagnostic Journal (Official Journal of ASET – Neurodiagnostic Society)
- 2020- USA
 Reviewer,
 Clinical Neurophysiology Practice
- 2020- USA
 Reviewer,
 Journal of Clinical Monitoring & Computing
- 2016- USA
 Reviewer,
 Journal of Clinical Neuroscience (JOCN)
- 2015- USA
 Reviewer,
 The Neurodiagnostic Journal (Official Journal of ASET – Neurodiagnostic Society)
- 2013- USA
 Reviewer,
 Journal of Clinical Neurophysiology (JCN)
- 2012- ESJ, Switzerland
 Reviewer,
 European Spine Journal (ESJ)

2011-13	Editor, Newsletter Committee, the Monitor, Official Newsletter of American Society of Neurophysiological Monitoring	ASNM, Chicago, IL, USA
2011-	Reviewer, AJET (American Journal of Electroneurodiagnostic Technology)	AJET Journal, ASET, Missouri, USA
1989-1990	Editor, Medical Section CENNA, Literary Society Magazine Khyber Medical College, University of Peshawar	Peshawar, Pakistan

GRADUATE RESEARCH PROJECTS:

2021-22	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Sensory Mapping of the Brain: Median nerve vs Tibial Nerve	Richardson, TX, USA
2021-22	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Motor Mapping of the Brain: Taniguchi vs Penfield Technique	Richardson, TX, USA
2021-22	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Electroencephalogram (EEG) vs Electrocorticography (ECoG)	Richardson, TX, USA
2020-21	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Pedicle Screw Stimulation During Thoracic Surgeries	Richardson, TX, USA
2020-21	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Neuromonitoring with Urethral Bladder Electrode	Richardson, TX, USA
2020-21	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Neuromonitoring for Carotid Surgeries	Richardson, TX, USA
2020-21	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Neuromonitoring for Thyroid Surgeries	Richardson, TX, USA
2020-21	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Mapping of the Spinal Cord	Richardson, TX, USA

2020-21	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Electromyogram (EMG) Mapping of the Spinal Cord	Richardson, TX, USA
2020-21	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Motor Mapping of the Spinal Cord	Richardson, TX, USA
2020-21	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Sensory Mapping of the Spinal Cord	Richardson, TX, USA
2019-20	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, IONM for Lumbar Spine Surgeries	Richardson, TX, USA
2019-20	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, IONM for Cerebellopontine Angle Surgeries	Richardson, TX, USA
2019-20	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, IONM for Cerebral Palsy Patients	Richardson, TX, USA
2019-20	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, IONM for Shoulder Surgeries	Richardson, TX, USA
2019-20	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Localization of the Cortical Language Areas: A Technical Report	Richardson, TX, USA
2019-20	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Localization of the Somatosensory Cortex: A Technical Report	Richardson, TX, USA
2019-20	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Localization of the Motor Cortex: A Technical Report	Richardson, TX, USA
2019-20	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Intraoperative Triggered Electromyography Recordings from the External Urethral Sphincter Muscles	Richardson, TX, USA
2018-19	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Utilizing Longer Intramuscular Needle Pair Electrodes	Richardson, TX, USA

2018-19	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Intraoperative Visual Evoked Potentials (VEP) Monitoring	Richardson, TX, USA
2018-19	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Motor Evoked Potential Recordings from the Urethral Sphincter Muscles (USMEPs)	Richardson, TX, USA
2018-19	<i>School of Behavioral and Brain Sciences,</i> The University of Texas at Dallas, Incidence of Position-Related IONM Changes	Richardson, TX, USA
1995-98	<i>Morphometric Imaging Lab</i> Generation of an average 3D skull image template using UNIX based C programming from CT scans to help in reconstructive plastic surgery of patients and forensic identification of skulls	CWRU, Cleveland, OH, USA
1989-92	<i>Clinical Study 4th Year Medical School</i> A statistical survey of the healthcare facilities among the rural area population of Peshawar, Pakistan	KMC, Peshawar, Pakistan

VOLUNTEER WORK:

2022 – 26	<i>Board of Directors,</i> American Society of Neurophysiological Monitoring (ASNM)	USA
2021-22	<i>Immediate Past-President,</i> American Society of Neurophysiological Monitoring (ASNM)	USA
2020-21	<i>President,</i> American Society of Neurophysiological Monitoring (ASNM)	USA
2019 - 20	<i>President-Elect,</i> American Society of Neurophysiological Monitoring (ASNM)	USA
2018-Present	<i>Visiting International Consultant Neurophysiologist</i> Global Innovation LLC	Dallas, TX, USA
2017	<i>Visiting Consultant Neurophysiologist,</i> Performed the First IONM during brain surgery in Pakistan	Abbottabad, Pakistan
2016	<i>Visiting Consultant Neurophysiologist,</i> Chairman, IONM Workshop I gave lectures and held discussions with spine surgeons from multiple centers of different cities—hands-on training during spine surgeries.	Rawalpindi, Pakistan
2016 – 20	<i>Board of Directors,</i> American Society of Neurophysiological Monitoring (ASNM)	USA

- 2016-Present *Member Research and Evidence Base Scientific Committee* KSA
Saudi Spine Society
- 2016 Invited by the Government of Pakistan to introduce Intra Operative Neurophysiological Monitoring (IONM) in Pakistan's various cities. **Invited Under:** Presidents Programme for the Care of Highly Qualified Overseas Pakistanis (PPQP), Ministry of Federal Education and Professional Training, Islamabad, Pakistan.
- 2015 *Visiting Consultant Neurophysiologist,* Rawalpindi & Peshawar, Pakistan
Performed IONM during Scoliosis surgery. I gave lectures and held discussions with spine surgeons and anesthesiologists from multiple centers of different cities.
- 1/15 - Present *Assistant Editor,* USA
The Neurodiagnostic Journal (Official Journal of ASET – Neurodiagnostic Society)
- 2014 - Present *Chairperson, ASNM Membership Committee,* USA
American Society of Neurophysiological Monitoring (ASNM)
Responsible for new member's recruitment and approvals; fellowship, awards, and board nominations
- 2014 - Present *Member, ASNM Education Committee,* USA
American Society of Neurophysiological Monitoring (ASNM)
Responsible for educational and conference activities
- 2014 - Present *Member, ASNM Research Committee,* USA
American Society of Neurophysiological Monitoring (ASNM)
Responsible for research activities
- 2014 - Present *Member, ASNM Guidelines & Standard of Care Committee,* USA
American Society of Neurophysiological Monitoring (ASNM)
Responsible for IONM guidelines and standards
- 2013 - Present *Website Administrator* USA
Southern Society of Electroneurodiagnostic Technologists (SSET)
- 2012 - Present *International Philanthropic IONM Program* Charlottesville, VA, USA
Jahangiri Consulting LLC
- 2011 *Principle,* Charlottesville, VA, USA
Dar-ul-Huda of Charlottesville, Sunday school
Administrative and teaching duties, including recruiting vice-principal, staff, and volunteers for Sunday school.
- 2007-11 *Charity Trips to Trinidad & Tobago,* Charlottesville, VA, USA
Supervised 3-4 annual charity trips of IONM during scoliosis surgeries
- 2008 *Visiting Consultant Neurophysiologist,* Islamabad, Pakistan
Performed IONM during various surgeries in medical centers

I gave lectures and held discussions with seven large medical centers / post-graduate centres in four different cities.

1989-92 *KMC Student Welfare Organization,* KMC, Peshawar, Pakistan
I collected donations for free medical camps
Conducted blood drives for needy patients.

SOCIETIES MEMBERSHIPS:

ASNM: American Society of Neurophysiological Monitoring
AANS: American Association of Neurological Surgeons
NASS: North American Spine Society
ASET: American Neurodiagnostic Society
ACNS: American Clinical Neurophysiology Society
ISIN: International Society of Intraoperative Neurophysiology
PINS: Pakistan International Neuroscience Society
APPNA: Association of Physicians of Pakistani Descent of North America
Neurology **MERIT**: Advancement of Neurology in Medical Teaching Institutions of Pakistan
- Medical Education & Research International Training & Transfer of Technology initiative
PMC: Pakistan Medical Corporation
SANS: Saudi Association of Neurological Surgery
Saudi Spine Society: Founding Member
