2022 ASNM Elections Information Form

Name (as you would like it to appear on the ballot): Lanjun Guo

Credentials: DABNM

Position and Organization: Director of Education, University of California – San Francisco

Education: MD, MSc,

Professional Affiliations:

Board director / Fellow, Chair of Guideline and Standard Committee of America Society of Neurophysiologic Monitoring (ASNM).
Board member, International Society of Intraoperative Neurophysiology (ISIN).
Distinguished professor, Chinese Pediatric Spine Society, Chinese Association of Orthopedic Surgeons

Publications, Awards & Appointments:

PUBLICATIONS:

Peer Reviewed Publications

- Wang J, **Guo L,** Holdefer R, Wang J, Guo L, Holdefer RN, Zhang Y, Liu Q, Gai Q, Zhang W. Intraoperative Neurophysiology and Transcranial Doppler for Detection of Cerebral Ischemia and Hyperperfusion during Carotid Endarterectomy. World Neurosurg. 2021 Jul 13:S1878-8750(21)01018-4. doi: 10.1016/j.wneu.2021.07.023. Epub ahead of print. PMID: 34271149.
- Lau D, **Guo L,** Deviren V, Ames C. Utility of Intraoperative Neuromonitoring and Outcomes of Neurologic Complication in Lower Cervical and Upper Thoracic Posterior Based Three Column Osteotomies for Cervical Deformity. J Neurosurgery. 2021 accepted.
- Holdefer RN, **Guo L**. Letter to the Editor. Random assignment of patients to intraoperative neuromonitoring for unruptured intracranial aneurysms? J Neurosurg. 2020 Jun 5:1-2. doi: 10.3171/2020.4.JNS20970. Epub ahead of print. PMID: 32502998.
- Gertsch JH, Moreira JJ, Lee GR, Hastings JD, Ritzl E, Eccher MA, Shils JL, 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. Response to: Is the new ASNM intraoperative neuromonitoring supervision "guideline" a trustworthy guideline? A commentary. J Clin Monit Comput. 2019 Feb 26. doi: 10.1007/s10877-019-00288-x. [Epub ahead of print] PubMed PMID: 30806935.
- Wang S, Li C, **Guo L,** Hu H, Jiao Y, Shen J, Tian Y, Zhang J. Survivals of the intraoperative motor evoked potentials response in pediatric patients undergoing spinal deformity correction surgery: What are the outcomes of surgery? Spine. (Phila Pa 1976). 2019 Spine (Phila Pa 1976). 2019 Aug 15;44(16):E950-E956.
- 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. Practice guidelines for the supervising professional: intraoperative neurophysiological monitoring. J Clin Monit Comput. 2018 Oct 30. doi: 10.1007/s10877-018-0201-9. [Epub ahead of print] PubMed PMID: 30374759.
- **Guo L,** Li Y, Han R, Gelb AW. The Correlation Between Recordable MEPs and Motor

Function During Spinal Surgery for Resection of Thoracic Spinal Cord Tumor. J Neurosurg Anesthesiol. 2018 Jan;30(1):39-43.

- Li Y, Meng L, Peng Y, Qiao H, **Guo L**, Han R, Gelb AW. Effects of Dexmedetomidine on motor- and somatosensory-evoked potentials in patients with thoracic spinal cord tumor: a randomized controlled trial. BMC Anesthesiol. 2016 Aug 2;16(1):51.
- Bayle N, Patel AS, Crisan D, **Guo LJ**, Hutin E, Weisz DJ, Moore ST, Gracies JM. Contribution of Step Length to Increase Walking and Turning Speed as a Marker of Parkinson's Disease Progression. PLoS One. 2016 Apr 25;11(4):e0152469.
- Holdefer RN, MacDonald DB, **Guo L**, Skinner SA. An evaluation of motor evoked potential surrogate endpoints during intracranial vascular procedures. Clin Neurophysiol. 2016 Feb;127(2):1717-25.
- Pancucci G, Potts MB, Rodríguez-Hernández A, Andrade H, **Guo L,** Lawton MT. Rescue Bypass for Revascularization After Ischemic Complications in the Treatment of Giant or Complex Intracranial Aneurysms. World Neurosurg. 2015 Jun;83(6):912-20.
- Potts, MB, **Guo, L** & Lawton, MT 2014, Motor Evoked Potentials During Cerebrovascular Surgery. in CM Loftus, J Biller & EM Baron (eds), *Intraoperative Neuromonitoring.* McGraw-Hill, New York, pp. 115-25.
- Tate MC, **Guo L**, McEvoy J, Chang EF. Safety and efficacy of motor mapping utilizing short pulse train direct cortical stimulation. Stereotact Funct Neurosurg. 2013;91(6):379-85.
- **Guo L,** Gelb AW. False negatives, muscle relaxants, and motor-evoked potentials. J Neurosurg Anesthesiol. 2011 Jan;23(1):64. doi: 10.1097/ANA.0b013e3181f57313. PMID: 21252712.
- **Guo L,** Gelb AW. The use of motor evoked potential monitoring during cerebral aneurysm surgery to predict pure motor deficits due to subcortical ischemia. Clin Neurophysiol. 2011 Apr;122(4):648-55. doi: 10.1016/j.clinph.2010.09.001. PMID: 20869304.
- **Guo L,** Jasiukaitis P, Pitts LH, Cheung SW. Optimal placement of recording electrodes for quantifying facial nerve compound muscle action potential. Otol Neurotol. 2008 Aug;29(5) : 710-3
- **Guo L,** Clark III JP, Warren RS, Nakakura EK: Compound muscle action potentials and spontaneous electromyography can be used to identify and protect the femoral nerve during resection of large retroperitoneal tumors. Ann Surg Oncol. 2008 Jun; 15 (6):1594-9. Epub 2008 Apr 12.
- Barajas RF Jr, Chi J**, Guo L,** Barbaro N. Microvascular decompression in hemifacial spasm resulting from a cerebellopontine angle lipoma:case report. Neurosurgery, 2008 Oct;63(4):E815-6.
- **Guo L**, Quiñones-Hinojosa A, Yingling CD, Weinstein PR. Continuous EMG recordings and intraoperative electrical stimulation for identification and protection of cervical nerve roots during foraminal tumor surgery. J Spinal Disord Tech. 2006 Feb 19(1): 37-42.
- Gracies JM, **Guo L,** Crisan D, Yang B, weisz DJ, Olandw CW. Ratio of large to small alternating movement frequencies (L/S) in the human upper limb: a parameter independent of the joint assessed. Mov Dis 2002; 17 (Suppl 5): S164
- Hagl C, Khaladj N, Weisz DJ, Zhang N, **Guo L**, Bodian CA, Spielvogel D, Griepp RB. Impact of high intracranial pressure on neurophysiological recovery and behavior in a chronic porcine model of hypothermic circulatory arrest. Eur J Cardiothorac Surg. 2002 Oct; 22(4):510-6.
- Hafidi A, **Guo Lanjun**, Sanes DH: Age-dependent failure of axon regeneration in organotypic culture of gerbil auditory midbrain. J Neurobiol. 1999 Nov 5; 41(2): 267-80.
- **Guo LJ,** Xui H, Ren ZY and Zhang X: Cushing's disease in the absence of pituitary adenoma on routine pathological examination: a clinical and pathological study. Chin. J. Neurosurgery 1993, 9(3): 5-7. Chinese
- Wang ZG, Zhang C, **Guo LJ,** and Zeng XJ: Juxtarenal aortic occlusion (report of 5 cases). Chin. J. Thoracic, Cardiac and Hemal. Surgery. 1985, 1(4): 206-208. Chinese

Conference Presentation or Invited Speaker

- **Guo L.** Application of intraoperative electrophysiological monitoring in spinal cord surgery. Invited speaker at “”. Virtual meeting. July 19, 2021.

- **Guo L.** Motor Mapping and Monitoring during Supratemporal Brain Tumor Surgery under general anesthesia. Invited speaker at 2021 Beijing Tiantan Hospital, Capital Medical University Summit Forum on New Advances in Glioma. Virtual meeting. June 26, 2021
- **Guo L.** Motor Evoked Potentials in Adults: Brain vs Spine. Invited speaker at ASNM 2021 Annual Conference. Virtual meeting. May 23-24, 2021
- **Guo L, Heldefer R.** Comparing Stimulus Thresholds between LQP vs Bipolar Stimulation for MEPs during Brain Aneurysm Surgery. E-poster at ASNM 2021 Annual Conference. Virtual meeting. May 23-24, 2021
- **Guo L.** Intraoperative Neuromonitoring for Brainstem Tumor Surgery, Anatomy and Methods. ASNM 2020 Fall victual meeting. September 20, 2020
- **Guo L.** The Functional Anatomy of Brain Cortex and Its Subcortex Pathway for Intraoperative Neuromonitoring. Invited speaker at 2019 Annual conference of American Society of Neurophysiological Monitoring (ASNM), Chicago, USA. May 3-5, 2019.
- **Guo L.** Intraoperative Neurophysiological Monitoring Techniques for Spinal Reconstructive Procedures. Invited speaker at the 2nd Xihua International Spine Summit Forum, Shanghai, China. April 28, 2019.
- **Guo L.** Overview of Intraoperative Neurophysiological Monitoring. Invited speaker at perioperative continue educational meeting at University of California, San Francesco. February 13, 2019
- **Guo L.** Motor Mapping and Monitoring during Supratempora Brain Tumor Surgery under General Anesthesia. Invited speaker at the first international conference for intraoperative neurophysiology and the 10th national IONM educational course, Beijing, China, November 22-25, 2018.
- **Guo L.** The Functional Anatomy of Brain Cortex and Its Subcortex Pathway. Invited speaker at International Society of Intraoperative Neurophysiology (ISIN) 2018 educational course, Madrid, Spain, November 1-3, 2018
- **Guo L.** Using Neurophysiological Techniques for Motor Mapping and Continuous Monitoring Motor Function during Resection of Motor-eloquent Brain Tumors. Invited speaker at the 11th Scientific Meeting for the Asian Australasian Society of Stereotactic and Functional Neurosurgery (AASSFN2018), Sun-Moon Lake, Taiwan on April 20 to 22, 2018
- **Guo L.** Neurophysiological Techniques Used during Skull Base Surgery. Invited speaker at the 11th Scientific Meeting for the Asian Australasian Society of Stereotactic and Functional Neurosurgery (AASSFN2018), Sun-Moon Lake, Taiwan on April 20 to 22, 2018
- **Guo L.** Intraoperative Neurophysiological Monitoring with Anesthesiology. Invited speaker at 2017 Korea Society of Anesthesiologist Annual Meeting, Seoul, South Korea, Nov 2-4. 2017
- **Guo L.** Anatomy of Spine and its Deformities. Invited Speaker at 6th International Society of Intraoperative Neurophysiology (ISIN) Congress and Educational Course, Seoul, South Korea, Oct 30 - Nov 4, 2017.
- **Guo L.** Neuromonitoring Lower Cranial Nerves IX to XII (LCNs) during Skull Base and Neck Surgeries. Invited speaker at 2017 Annual conference of American Society of Neurophysiological Monitoring, Cleveland, USA. May 5-7, 2017
- **Guo L.** Motor Evoked Potentials Triggered by Cortical, Subcortical or Spinal stimulation. Invited speaker at 18th Capital city of conference of the Germany society of anesthesiology and intensive care medicine. Berlin, Germany. September 13-17, 2016
- **Guo L.** Using Intraoperative Neurophysiolical Monitoring (IONM) during Spinal Reconstructive Procedures. Invited speaker at 9th China National EMG and IONM training Symposium. Guiyang, China. August 4-7, 2016
- **Guo L,** Li Y, Meng L, Han R, Gelb AW. Preoperative Motor Function Predicts Ability to Record Muscle Motor Evoked Potentials. Oral presentation at 5th Congress of international society of intraoperative neurophysiology, Rio de Janeiro, Brazil. November 12-19, 2015.
- **Guo L**. Evidence That High Voltages of tcs-MEP Stimulation Can Bypass Ischemic Area in Brain. Oral presentation at 2015 Annual meeting of American Society of Neurophysiological Monitoring, Chicago, USA. May 5-7, 2015
- **Guo L**. Deviren V, Ames C. Using epidural spinal cord stimulation for motor evoked potential to monitor nerve root function during spine surgery with pedicle subtraction osteotomies: technical

case report. Oral presentation at training conference of international society of intraoperative neurophysiology. Istanbul, Turkey Oct. 23-25 2014

- **Guo L.** Neurophysiological Monitoring in Cerebral Vascular Surgery. Invited Speaker at National Intraoperative Neuromonitoring Annual Training Meeting. Beijing, China. August 2014
- **Guo L.** False negative of motor evoked potential or delayed deficit after spine surgery with pedicle subtraction osteotomy: case study, at 2014 annual meeting of American society of neurophysiological monitoring, Chicago, USA. May 9-11, 2014
- **Guo L.** Cui W, Francis Wolf F, Lawton MT, Gelb AW. Are persistent changes in SEPs and MEPs sensitive for predicting postoperative limb motor deficit during cerebral aneurysm surgery? Oral presentation at 4th Congress of international society of intraoperative neurophysiology, Cape Town, South Africa, November 11-16, 2013.
- **Guo L.** Cui W, Francis Wolf F, Lawton MT, Gelb AW Monitoring upper and lower limb motor evoked potentials is no better than upper limb alone to predict outcome during cerebral aneurysm Surgery, at 41th annual meeting of Neuroscience in Anesthesiology and Critical Care (SNACC), San Francisco, USA, October, 2013
- **Guo, L.** Using SEP, MEP and EEG monitoring during cerebral aneurysm surgery to protect and predict brain ischemia. Invited speaker at Tiantan International Neurosurgical Anesthesia Symposium. Beijin, China, August 2013.
- **Guo L.** Actual and future significance of intraoperative neuromonitoring, Multimodality intraoperative neuromonitoring. Invited speaker at 13th Capital city of conference of the Germany society of anesthesiology and intensive care medicine. Berlin, Germany. September 12-14, 2011
- **Guo L,** Barbaro NM, Merrick SH, Messina LM. Experiences using motor evoked potential monitoring during distal thoracoabdominal aorta surgery. Oral presentation at the IX Spinal Cord Monitoring Meeting, Roma, Italy, May 3-6, 2004
- **Guo L,** Weinstein P, and Yingling CD. Electrical stimulation and spontaneous EMG recording for identification and protection of nerve root during cervical dumbbell tumor surgery. Oral presentation at the 14th annual meeting of American society of neurophysiologic monitoring. Las Vegas, May 8-11, 2003
- **Guo L** and Dan H. Sanes: In vitro analysis of glycinergic survival in postal auditory CNS: dependence on target (abstract). Society for Neuroscience Abstract, 1996, 22(1): 312.

Peer-reviewer for scientific manuscripts

Clinical Neurophysiology; Neurosurgery; Clinical Neurology & Neurosurgery; Journal of Clinical Monitoring and Computing; Anesthesia & Analgesia; British Journal of Anaesthesia; Acta Anaesthesiologica Scandinavica; Journal of Neurosurgical Anesthesia; Neurosciences Journal, Neurosurgery, Journal of Clinical Neurophysiology Practice, Neurosurgery Review.

Educational leadership

Actively involved in the organizing and conducting educational programs as a member of Board of Director of America Society of Neurophysiological Monitoring and Board Member of International Society of Intraoperative Neurophysiology.

Founding faculty and organizer of an International Intraoperative Neurophysiological Monitoring Training Program at UCSF Medical Center.

1. How do you feel you can contribute to the leadership of ASNM? What strengths/passions/talents do you hold that would benefit ASNM?

Education, training and research in the field of surgical neurophysiology are my passion and it is what I have been doing for the past 20 years ever since I transitioned my career as a practicing Neurosurgeon to a full time Clinical Neurophysiologist. As the director of education at UCSF medical center, I have created an international IONM training program in the institute for the foreign physicians who are interested in surgical neurophysiology. I have served as a

member of the board directors at ISIN and ASNM, and currently serving as the chair of ASNM guidelines and standards committee. I realize that IONM, as a field of medical care, has huge potential to grow in terms of technical/clinical advancements and to support the increased utilization of IONM modalities in relevant surgical procedures across various parts of the globe currently with low penetration. My experience as a neurosurgeon by training and working in the IONM field for more than 20 years help me to have a higher vision of setting the goals for the ASNM towards attaining the full potential and improving the quality of the IONM service in the medical field.

2. With changes in health care service delivery and reimbursement, what and how do you feel you can contribute to keep ASNM moving forward in the right direction?

IONM has become part of standard medical care, such as in neurosurgery, orthopedic surgery, vascular and ENT surgeries. In the IONM field, people provide services both at technical and professional levels. technologist who is CNIM certified provide service under the professional supervision. Medical professionals with different background have been working in the field, such as neurophysiologists, audiologists, neurosurgeons, neurologists, anesthesiologists, orthopedists, and ENT surgeons. For the practice at professional level, people with DABNM have been played an important role in the field. ASNM should work together with other medical and professional societies in an attempt to gain wider recognition. We should work together to educate hospitals, patients and others, and to improve the quality of service, including to set up the standard for professional credentialing in IONM and enhance awareness of the importance of IONM to ensure the safety of patients.

3. ASNM constantly seeks ideas of how to better serve our membership through education, resources, representation to other professional entities, connections and networking or other means of advancement. What do you think ASNM could offer its members that would provide value?

In addition to continue to provide high standard educational courses and programs and to collaborate with other related sociates in the medical field to improve the quality of IONM professional, we should put our efforts on: 1) Expand the venues for career workshops and orientation in universities and educational institutions to leverage IONM career opportunities for attracting talents from related life sciences disciplines. 2) To develop clear guidance and structured syllabus to help candidates who are willing to transition from the technologist level to professional level expertise (DABNM exam preparation and course contents, similar to the ASET type of courses which is aimed for technologist/CNIM level preparation). 3) Create a core funding support plan to distribute as annual research scholarships to selected research proposals from individuals/groups.

4. How do you see the role of the ASNM in advocating for the profession on intra-operative neuromonitoring?

The ASNM was founded to serve the blossoming field of IONM. Currently it is the only society exclusively focused on serving the IONM community. With our exceptional leaderships, both past and present, ASNM has been making stupendous effort in establishing IONM as a standard of care in relevant surgical procedures to improve quality of patient care. We should continue to build on the resources for training and education (in terms of the course content and presentations) and networking opportunities which would immensely help trainees, recent graduates and prospective students who are interested in pursuing IONM as a career. This

should also help the current IONM professionals and technologists to gain continuing medical education credits in their pursuit of life-long learning. ASNM is also working on the formulation and updating of guidelines attempt to standardize IONM practice within US.

5. Describe you academic or professional contributions to the field of intra-operative neuromonitoring (this can include publications, reviews, research contributions, creating or advancing professionalism in a service that is dedicated to intra-operative neuromonitoring, education, outreach, presentations, running or organizing meetings (in-house, local, national, international), societal contributions …)

I have published more than 20 peer review research articles (please see the publication section for a detailed list) in the field of IONM. These include both human and animal studies employing IONM modalities for brain/spinal cord tumors, neurovascular spine reconstruction and brainstem surgical procedures. In collaboration with the anesthesia department at UCSF, I actively conduct animal studies and mentor trainees in pursuing IONM-related research projects.

As the Director of education (IONM) at UCSF, I oversee the training and educational activities within the medical center, which also expands both nationally and internationally. An international IONM training program was created at UCSF under my initiatives, wherein more than 15 physicians from all over of the world have attended till date, with many more candidates waiting for the world-wide pandemic to be resolved. I have been invited as a speaker at several international and national meetings for surgeons, neurophysiologists, and anesthesiologists (please see the Conference/Meeting section for a detailed list) . I have also organized several IONM training meetings at ASNM and local hospitals in San Francisco and nearby cities.

6. Personal Statement: Please provide any additional information to the members.

As a former neurosurgeon and surgical neurophysiologist with more than 20 years of experience, I would like to share with my fellow members on my vision of advancing IONM as a standard of medical care, and request everyone to support me in my endeavors to implement these visions. Let us work together to further improve the quality of the standardized services that we provide, and to advancing this branch of science by making extra efforts in education, training, and research responsibilities.

2022 Nominees Conflict of Interest Disclosure categories

- Disclosures
  - **Scientific advisory board**: No.
  - **Scientific research**: No.
  - **Speakers bureau**: No.
  - **Stock holder (only if >5% in the company)**: No.
  - **Stock options**: No.
  - **Company leadership/board of directors**: No.
  - **Product Royalties**: No.
  - **Travel (paid for by other than your employer)**: No.
  - **Society leadership and IONM related boards**: ASNM.
  - **Patents**: No.

- **Employed by**: University of California, San Francisco.